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APPRENTICESHIP UPDATE REPORT

Prepared by:

R.J. Allison

Coordinator of Manpower Training

Department of Manpower and Labour

For:

The Hon. Dr. A.E. Hohol

Minister of Manpower and Labour

September 4, 1974

ALBERTA CAREER DEVELOPMENT
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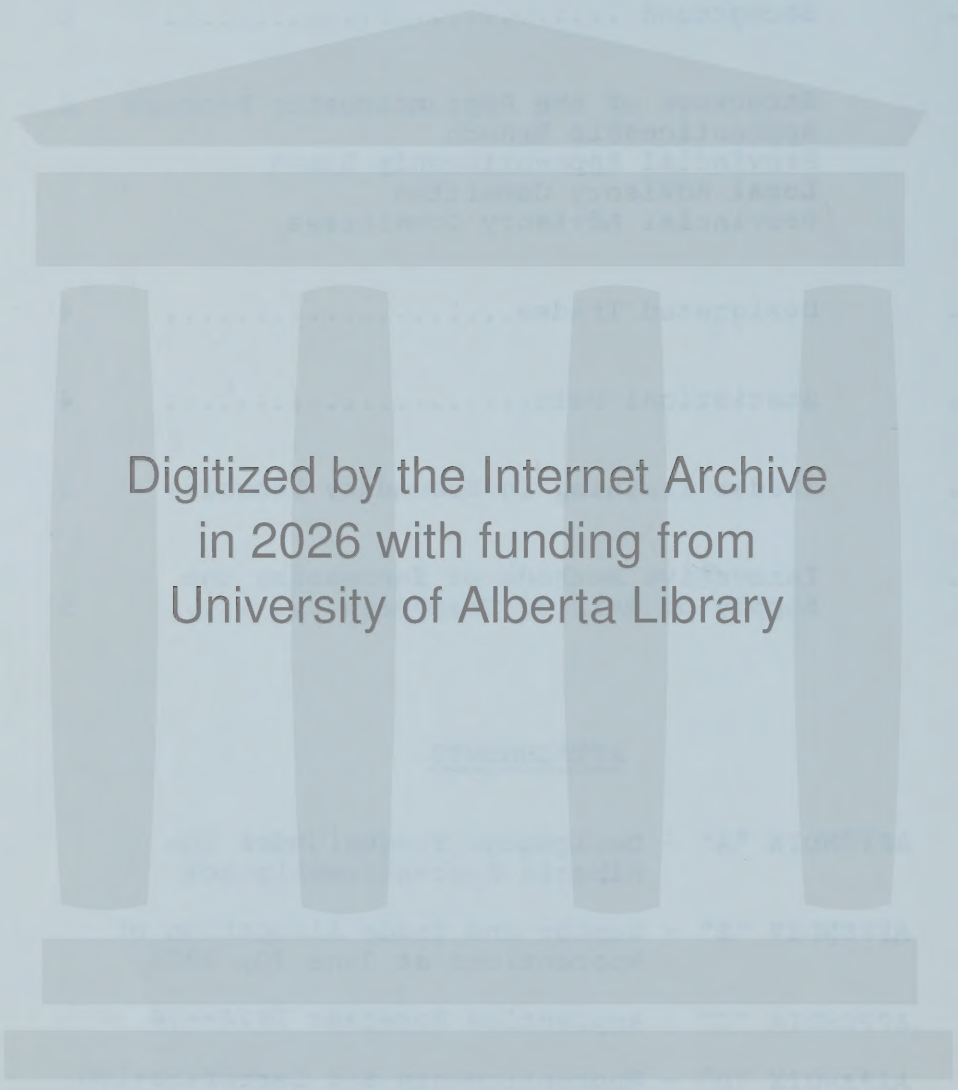
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APPRENTICESHIP UPDATE REPORT

1. Background

To the public "apprenticeship" is for the most part thought of as an indentureship involving the serving of a period of time as an understudy to a craftsman. In reality "apprenticeship" is synonymous with "training". It is a process of developing skilled tradesmen through a system of education involving periods of institutionalized theoretical instruction combined with periods of on-the-job work experiences designed to comply with theory and practicum standards of a trade determined and set by a provincial advisory committee. This process is the Alberta Apprenticeship Program.

The Program began 30 years ago with the passing of the Apprenticeship Act. From a modest beginning it has grown steadily; reaching a milestone in the month of May of this year when it graduated its 25,000th apprentice.

It has been the practise of the Apprenticeship Branch to administer the Program in response to the requests of management and labour. This style of operation will continue, but added to it will be a series of operational innovations aimed at streamlining the Program. Notwithstanding the positions of management and labour in the Program the Apprenticeship Branch will, in cooperation with them, endeavour to relate this Program to the immediate and future development of tradesmen required to meet the demands of the Alberta Labour Force. In doing so, the Apprenticeship Branch will be shifting its role from that of responding to management and labour, to that of requesting management and labour to respond to the requirements of the Alberta Labour Force.

2. Structure of the Apprenticeship Program.

(a) Apprenticeship Branch
This branch is responsible for the overall

administration of the Program. It maintains field offices at: Lethbridge, Calgary, Red Deer, Grande Prairie, Edmonton and Fort McMurray. Two additional field offices are planned for Medicine Hat and Peace River in 1975. The branch is staffed with approximately 140 management, technical and clerical personnel. The immediate responsibility for the operation of the branch rests with the Director of Apprenticeship.

(b) Provincial Apprenticeship Board

Realizing that the success of the Program is, in a large measure, attained by the cooperation of employers and organized labour, the Apprenticeship Act called for the establishment of a Provincial Apprenticeship Board whose function is to serve as an advisory body for the Minister of Manpower and Labour on a range of matters related to Apprenticeship such as: the designation of new trades, the implementation and amendment of trade regulations, etc. The Board membership is made up of two members from management, two members from labour and a chairman who is currently designated in the Act to be the Director of the Apprenticeship Branch (this membership roster is currently under review). Meetings of the Board are scheduled monthly except during the vacation season; it is normal to meet nine or ten times a year.

(c) Local Advisory Committee

The primary means by which management and labour play an active part in the Apprenticeship Program is the Local Advisory Committee. These Committees consist offour members; two from management and two from labour. It is the function of these Committees to hear complaints of employers and apprentices, counsel apprentices, and deal with matters pertaining to Program policy. Each designated trade has a Local Advisory Committee located in geographic areas having sufficient need for their establishment. There are currently approximately

100 Committees throughout the Province that meet on an average of four times annually.

(d) Provincial Advisory Committees

In addition to the local committees, there is a Provincial Advisory Committee in each designated trade or group of trades. A Provincial Advisory Committee (PAC) for a trade is made up of all Local Advisory Committee members along with educational and branch staff personnel. The Assistant Director of the Program Development and Standards Section of the Apprenticeship Branch is usually (not required by legislation) the Chairman of PAC meetings.

It is the function of PACs to make regulations regarding the trade or trades they represent with respect to the following matters:

(i) qualifications concerning the age of apprentices;

(ii) length of time of apprenticeship;

(iii) the number of apprentices who may be apprenticed to each employer;

(iv) the content of the courses to be given at the trades training school or centre, and

(v) the establishment of standards of proficiency to be reached during each year of apprenticeship and the setting of the final standard of competency upon which journeyman status is granted.

There is one Provincial Advisory Committee for each trade. Each Committee meets when sufficient or significant agenda material arises. This sometimes results in two or three meetings per annum for a trade Committee. At other times only one meeting may be called in

two or three years. Currently there are 33 Provincial Advisory Committees in operation with slightly more than 400 active committee members.

3. Designated Trades

The number of designated trades under the Apprenticeship Act as at September 1, 1974 is 36. (see Appendix "A" for list of designated trades)

4. Statistical Data

(a) Number of Apprentices on Registry as at June 30, 1974 is 10,141 (see Appendix "B" for trade allocations).

(b) Forecast 1974-78 Apprentice input journeymen, output projections (see Appendices "C" & "D"). N.B. - Planning Secretariat is preparing a supplemental forecast based on economic growth in the Province.

5. Trades Training in Secondary Schools

Secondary school graduates from a technical-vocational program who have accumulated 35 credits in the trade in which they have subsequently elected to become indentured as an apprentice in the Alberta Apprenticeship Program may, at the discretion of their employer, receive up to 12 months of advanced standing. The number of graduates entering apprenticeship with this advanced standing are few in number because many employers do not consider the secondary school program to be equivalent in theory and practicum to the first 12 months of the Alberta Apprenticeship Program. As a result of these circumstances secondary school students who have decided to pursue a trades career and remain in school until graduation are being penalized when compared to a student who elects to leave school at the end of grade 10 and proceed directly into the Alberta Apprenticeship Program. The graduate finds himself one and probably two years behind in his apprenticeship compared to the student who terminated at grade 10. This condition appears to have

developed an academic anomaly. For the purpose of rectifying this anomaly the Apprenticeship Branch will be meeting with the Department of Education in an effort to find a solution that is mutually agreeable to all parties involved.

6. Innovative Methods of Increasing the supply of Skilled Tradesmen

See Appendix "E".

APPENDIX "A"

APPENDIX "A"

DESIGNATED TRADES UNDER THE ALBERTA APPRENTICESHIP ACT

AS AT SEPTEMBER 1, 1974

Agriculture Mechanic
Appliance Serviceman
Auto Body Mechanic

Baker
Bricklayer

Cabinetmaker
Carpenter
Communication Electrician
Cook
Electrical Mechanic
Electrician

Floor Covering Mechanic
Gas Fitter
Glassworker
Heavy Duty Mechanic
Heavy Equipment Operator
Instrument Mechanic
Insulator

Lather
Machinist
Millwright
Motor Mechanic

Partsman
Painter
Plasterer
Plumber
Power Electrician
Radio Technician
Refrigeration Mechanic
Roofer
Sheet Metal Mechanic
Steamfitter (pipefitter)
Steel Fabricator
Tile Setter
Water Well Driller
Welder

APPENDIX "B"

APPENDIX "B"

INFORMATION - APPRENTICESHIP PROGRAM

Statistical:

1 Number of Apprentices on Register at June 30, 1974 - 10,141

Trade	1st	2nd	3rd	4th	Totals 5th
BRICKLAYERS	17	57	55		129
CARPENTERS	164	248	160	206	778
ELECTRICIANS	299	384	327	526	1536
PAINTERS & DECORATORS	27	41	28	31	127
PLASTERERS	16	2	4		22
PLUMBERS	120	225	229	316	890
STEAMFITTERS	13	11	19	43	86
GASFITTERS	11	14	42		67
MOTOR MECHANICS	287	393	401	485	1566
AUTO BODY MECHANICS	97	153	104	138	492
SHEET METAL MECHANICS	38	128	110	160	436
WELDERS	308	446	470		1224
RADIO TECHNICIANS	14	24	28	66	132
REFRIGERATION MECHANICS	23	18	22	30	93
MACHINISTS	40	41	48	54	183
MILLWRIGHTS	54	28	31	17	130
LATHERS	12	16	14		42
COOKS	18	35	61		114
HEAVY DUTY MECHANICS	149	198	200	273	820
TILESETTERS	11	2	9		22
POWER ELECTRICIANS	8	36	23	35	102
COMMUNICATION ELECTRICIANS	71	74	46	75	266
APPLIANCE SERVICEMEN	12	46			58
BAKERS	11	7	15		33
GLASSWORKERS	14	14	13	12	53
STEEL FABRICATORS	46	45	68		159
PARTSMEN	79	82	95		256
ROOFERS	16	17	32		65
FLOORCOVERING MECHANICS	19	19	25		63
ELECTRICAL MECHANICS	6	14	4	7	31
INSTRUMENT MECHANICS	13	14	14	28	69
AGRICULTURAL MECHANICS	6	15	1	24	46
INSULATORS	6	10	35		51
TOTALS	2025	2857	2733	2526	10141

APPENDIX "C"

APPENDIX "C"

C. Forecast to 1976

rade	New Apprentices				Graduates			
	74	75	76	Total 74-76	74	75	76	Total 74-76
gricultural Mechanic	20	25	30	75	24	25	20	69
ppliance Serviceman	27	25	20	72	6	9	12	27
aker	19	23	28	70	9	12	14	35
ricklayer	78	85	95	258	14	22	36	72
arpenter	365	340	330	1035	120	140	160	420
ommunication Electrician	235	200	200	635	70	70	150	290
ook	67	84	92	243	36	38	44	118
lectrical Mechanic	17	17	16	50	4	9	11	24
loorcovering Mechanic	25	28	31	84	23	16	20	59
lassworker	23	26	29	78	10	9	10	29
eavy Equipment Operator	10	10	20	40	-	-	8	8
ıstrument Mechanic	35	37	40	112	10	14	13	37
ısulator	35	20	30	85	14	15	16	45
ather	28	25	25	78	10	14	20	44
achinist	70	81	75	226	35	30	46	111
illwright	62	78	51	191	26	33	25	84
ainter and Decorator	50	55	56	161	26	30	24	80
artsman	149	151	177	477	40	46	64	150
lasterer	-	-	-	-	-	-	-	-
ower Electrician	34	37	40	111	9	7	21	37
oofer	28	31	35	94	13	18	20	51
eel Fabricator	91	130	138	359	35	40	56	131
ile Setter	-	-	-	-	-	-	-	-
uto Body Mechanic	255	268	284	807	143	151	159	453
lectrician	443	458	473	1374	190	264	270	724
asfitter	18	16	24	58	32	20	16	68
eavy Duty Mechanic	379	391	402	1172	140	142	151	433
otor Mechanic	656	669	672	1997	470	485	490	1445
lumber	290	305	325	920	240	265	195	700
adio Technician	53	51	49	153	27	32	26	85
efrigeration Mechanic	33	34	35	102	14	10	17	41
leet Metal Mechanic	139	150	162	451	80	87	94	261
eamfitter	25	35	45	105	24	19	15	58
elder	600	650	662	1912	270	315	298	883
Totals	4359	4535	4691	13585	2164	2387	2521	7072

APPENDIX "D"

APPENDIX "D"

FORECAST TO 1978

of the performance of

THE APPRENTICESHIP AND CERTIFICATION PROGRAMS

Prepared by

APPRENTICESHIP AND TRADESMEN'S QUALIFICATION BRANCH

ALBERTA

MANPOWER AND LABOUR

August 1974

EXPLANATORY OVERVIEW

This forecast of the performance of the apprenticeship and certification programs in the trades designated under The Apprenticeship Act assumes, as did the previous forecast prepared in March 1972, that the programs operate as they are presently structured. Individual trade forecasts are based on apprenticeship statistics to December 31, 1973, with the projections developed by extrapolation, and appropriate adjustments introduced, based on knowledge of current and expected conditions in industry by the Program Development Officers, Supervisor of Program Standards and other staff members (there are explanatory footnotes to most individual trade forecasts).

The forecast concerns itself with journeymen and apprentices in the work force of the 35 trades designated under The Apprenticeship Act. Workers of other classifications in these trades are not included. Such is relatively insignificant in T. Q. trades; it could be substantial in such occupations as Carpenter, Cooking and Floorcovering.

It should be carefully noted that the "Indications of Demand for Tradesmen" used in preparation of the 1972 report - Alberta Population, Passenger Car Registrations, Electricity Generated in Alberta, Construction in Alberta (Dollar Value) - are not included in this forecast and have not been used in preparing these projections, except insofar as general awareness of those factors may have influenced the opinions of those making judgments about individual trades. We will be working with the Planning Secretariat during the ensuing months in developing a forecast of apprentices and journeymen in Alberta, based on economic growth in the province, our program directions and other pertinent data that will affect the apprenticeship program in the immediate years ahead.

In the summary, the base from which the forecast of journeymen in the work force was started, is the estimated 1971 work force's figures included in the 1972 report. Statistics for 1972 and 1973 are added to the 1971 estimates and then carried to 1978. The adjectives used in the 1972 document relating to the 1971 journeyman work force estimates, "reasonable - ball park - guesstimate", must therefore be still considered as pertinent to this forecast.

The forecasted net increase in the journeyman-apprentice work force population of the designated trades is 8,548. This is 13.5 percent of the estimated population at the 1973 base.

R. H. WATSON, Assistant Director
Program Development and Standards

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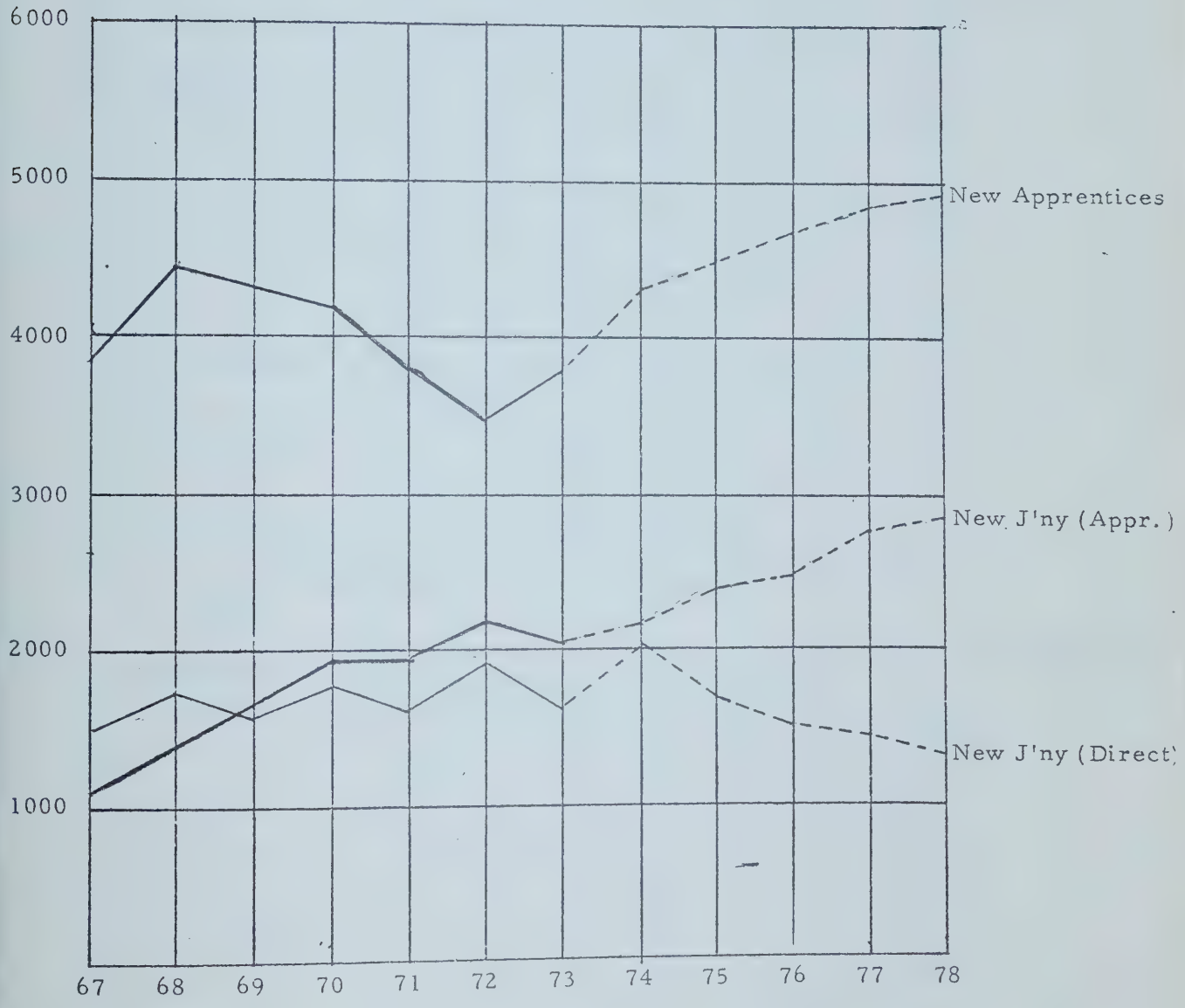
Bricklayer 6
Carpenter 7
Communication Electrician 8
Cook 9
Electrical Mechanic 10
Floorcovering Mechanic 11
Glassworker 12
Heavy Equipment Operator 13
Instrument Mechanic 14
Insulator 15
Lather 16
Machinist 17
Millwright 18
Painter and Decorator 19
Partsman 20
Plasterer 21
Power Electrician 22
Roofer 23
Steel Fabricator 24
Tile Setter 25
Auto Body Mechanic 26
Electrician 27
Gasfitter 28
Heavy Duty Mechanic 29
Motor Mechanic 30
Plumber 31
Radio Technician 32
Refrigeration Mechanic 33
Sheet Metal Mechanic 34
Steamfitter 35
Welder 36

ALL DESIGNATED TRADES FORECAST
1974 To 1978

	1974	1975	1976	1977	1978	Total
New Apprentices	4359	4535	4690	4827	4929	23,340
New Journeyman (Appr.)	2166	2387	2521	2815	2868	12,757
New Journeyman (Direct)	2018	1631	1478	1418	1328	7,873



Comments:

If they are new journeymen direct going down?
What is the total number of journeymen in the Province?

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FORECAST - JOURNEYMAN AND APPRENTICESHIP WORK FORCE 1978

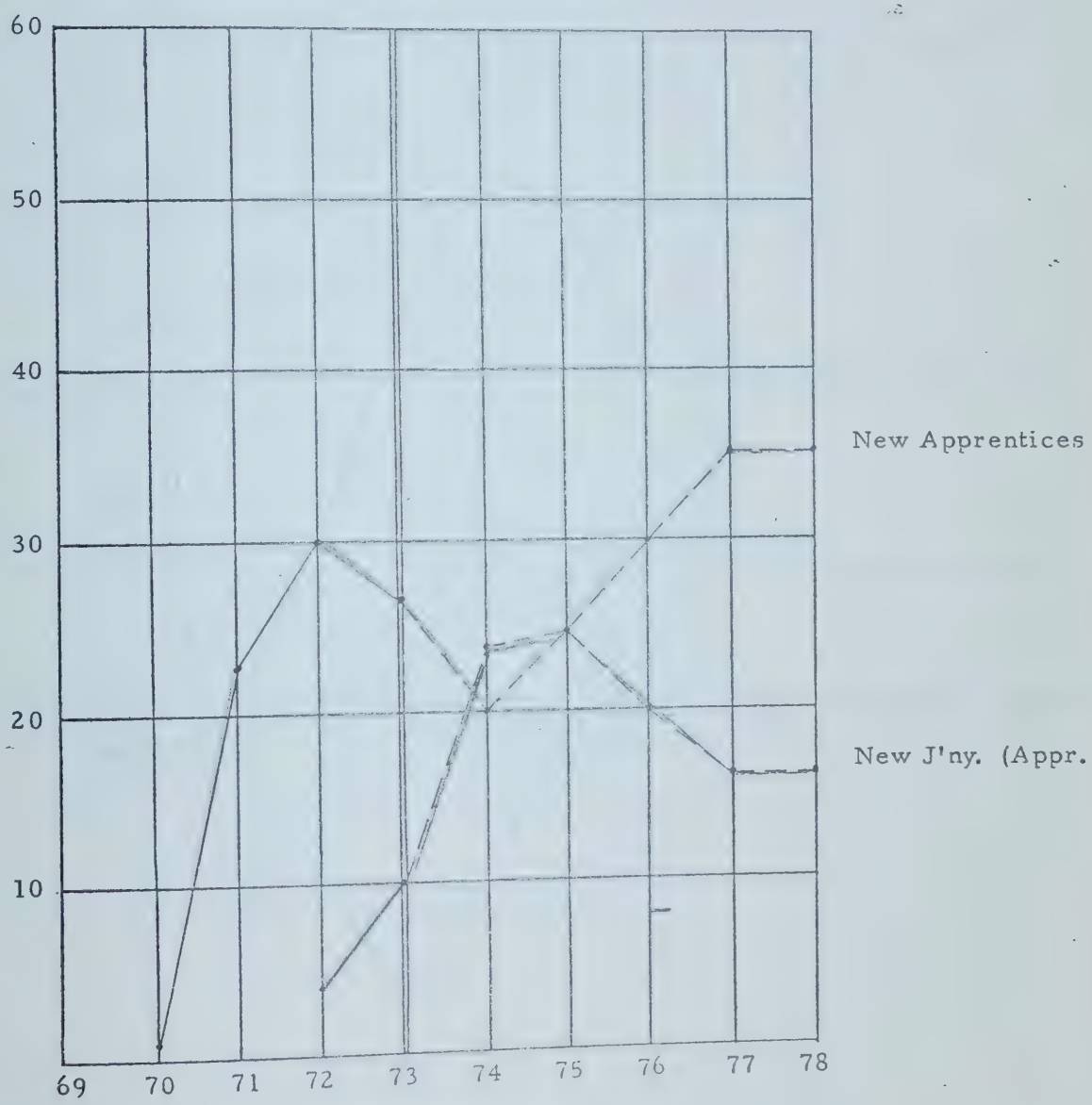
QUALIFICATION TRADES (NONCOMPULSORY)	1973 Work Force			74-78 J'man. Addition	74-78 J'man. Attrition at 20% - 5 yrs.	1978 Work Force		
	J'man.	App.	Total			J'man.	App.	Total
Agricultural Mechanic	344	43	387	101	89	356	96	452
Appliance Serviceman	325	46	371	138	92	371	75	446
Baker	526	31	557	153	136	543	086	629
Bricklayer	612	99	711	207	164	655	228	833
Carpenter *	6463	758	7221	970	1486	5947	1012	6959
Communication Electrician	2391	240	2631	715	620	2486	775	3261
Cook	3111	104	3215	423	706	2828	182	3010
Electrical Mechanic	265	29	294	97	72	290	39	329
Floorcovering Mechanic	469	53	522	151	124	496	78	574
Glassworker	298	46	344	93	78	313	86	399
Heavy Equipment Operator*	710	0	710	91	160	641	67	708
Instrument Mechanic	308	65	373	187	99	396	90	486
Insulator	260	46	306	60	64	256	70	326
Lather	145	38	183	90	47	188	61	249
Machinist	864	153	1017	378	248	994	241	1235
Millwright	473	94	567	375	169	679	128	807
Painter and Decorator	2355	128	2483	338	538	2155	155	2310
Partsman	1551	229	1780	513	412	1652	377	2029
Plasterer	226	22	248	12	47	191	-	191
Power Electrician	1256	77	1333	221	295	1182	125	1307
Roofer	457	60	517	161	123	495	98	593
Steel Fabricator*	1780	133	1913	607	478	1909	223	2132
Tile Setter	116	19	135	20	26	110	-	110
SUB	25,305	2,513	27,818	6,101	6,273	25,133	4,292	29,425
PROFICIENCY TRADES (COMPULSORY)								
Auto Body Mechanic	1592	488	2080	992	517	2067	672	2739
Electrician *	4698	1451	6149	1783	1296	5185	1545	6730
Gasfitter	258	57	315	100	72	286	77	363
Heavy Duty Mechanic	2074	793	2867	1327	680	2721	966	3687
Motor Mechanic	7630	1565	9195	3210	2168	8672	1611	10,283
Plumber *	2568	875	3443	1544	822	3290	1130	4420
Radio Technician	789	142	931	355	228	916	144	1060
Refrigeration Mechanic	279	81	360	210	97	392	85	477
Sheet Metal Mechanic	1215	432	1647	585	360	1440	540	1980
Steamfitter *	1404	89	1493	238	328	1314	124	1438
Welder	5633	1110	6743	3650	1856	7427	1560	8987
SUB	28,140	7,083	35,223	13,994	8,424	33,710	8,454	42,164
TOTAL	53,445	9,596	63,041	20,095	14,697	58,843	12,746	71,589

The number of journeymen in the work force in 1973 was established by using the estimated figures in the 1971 forecast plus additions as shown in the individual trade forecasts for the years 1972 and 1973.

*1971 estimated numbers of journeymen changed in view of new information.

AGRICULTURAL MECHANIC

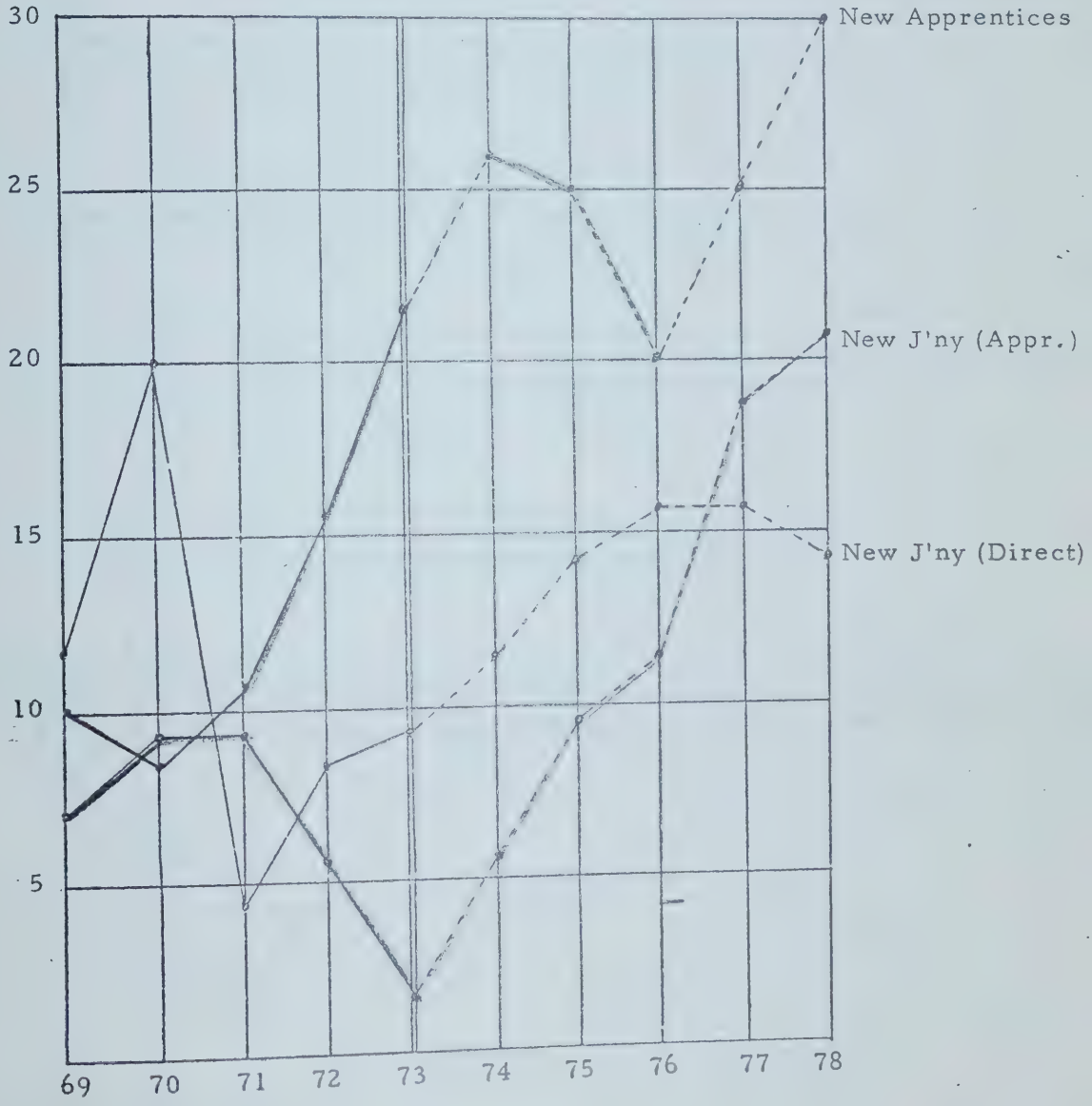
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices		1	23	30	27	20	25	30	35	35
New J'ny. (Appr.)				4	10	24	25	20	16	16
New J'ny. (Direct)										



Comments: Forecast - 197 increase by 1978 - 101 J'ny 96 Apprentices
There has been no Journeyman Certification in this trade. Overlap with other mechanical trades may have retarded its rate of development. Launching a new block technical training system this year which should increase participation.

APPLIANCE SERVICEMAN

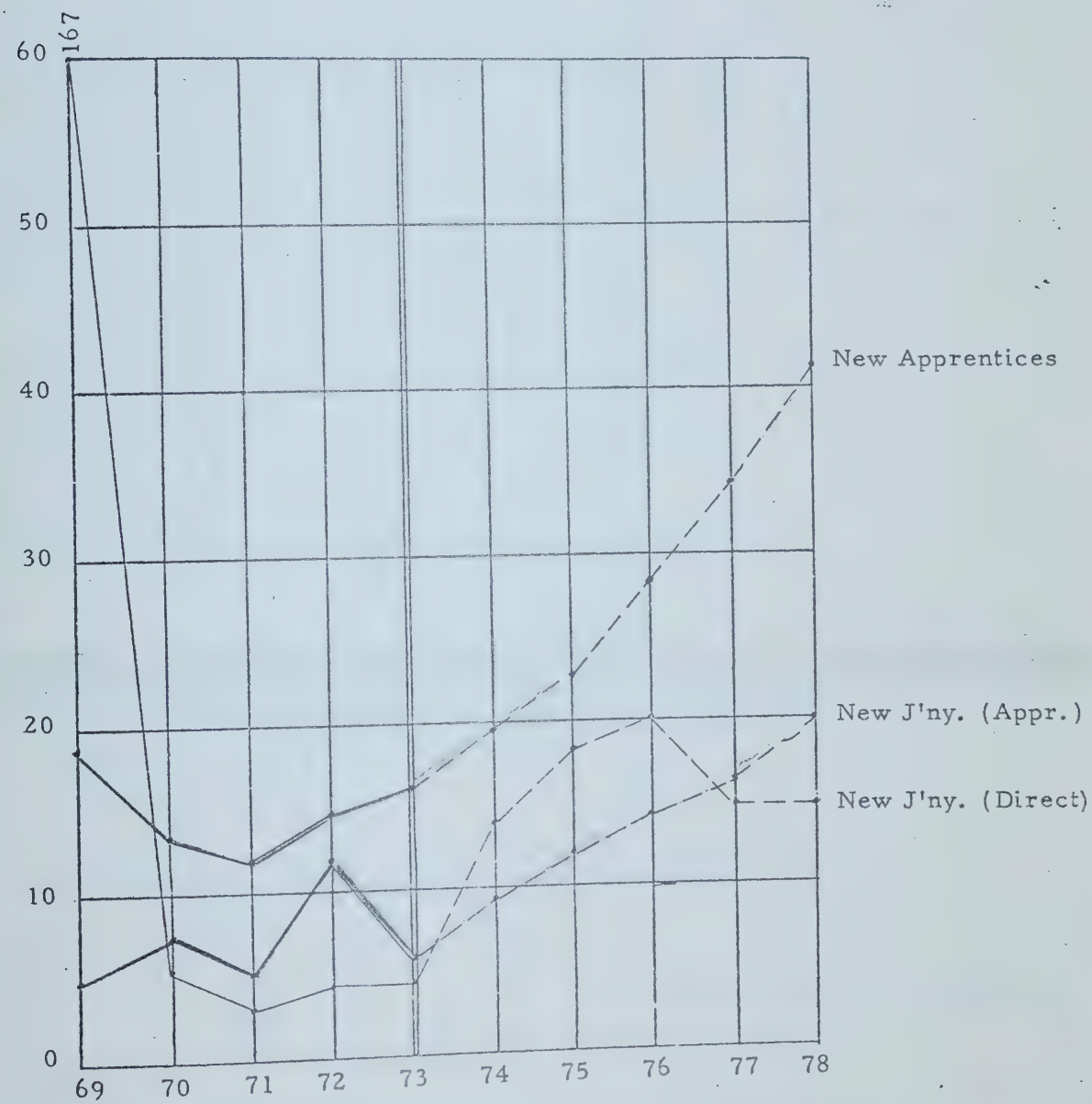
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	10	8	11	16	22	27	25	20	25	30
New J'ny. (Appr.)	7	9	9	6	2	6	9	12	18	21
New J'ny. (Direct)	12	20	4	8	9	12	14	16	16	14



Comments: Forecast - 213 increase by 1978 - 138 J'ny 75 Apprentices
Block training and block certification in four separate branches, introduced in 1974, may better meet the needs of industry with results reflected in the forecast above.

BAKER

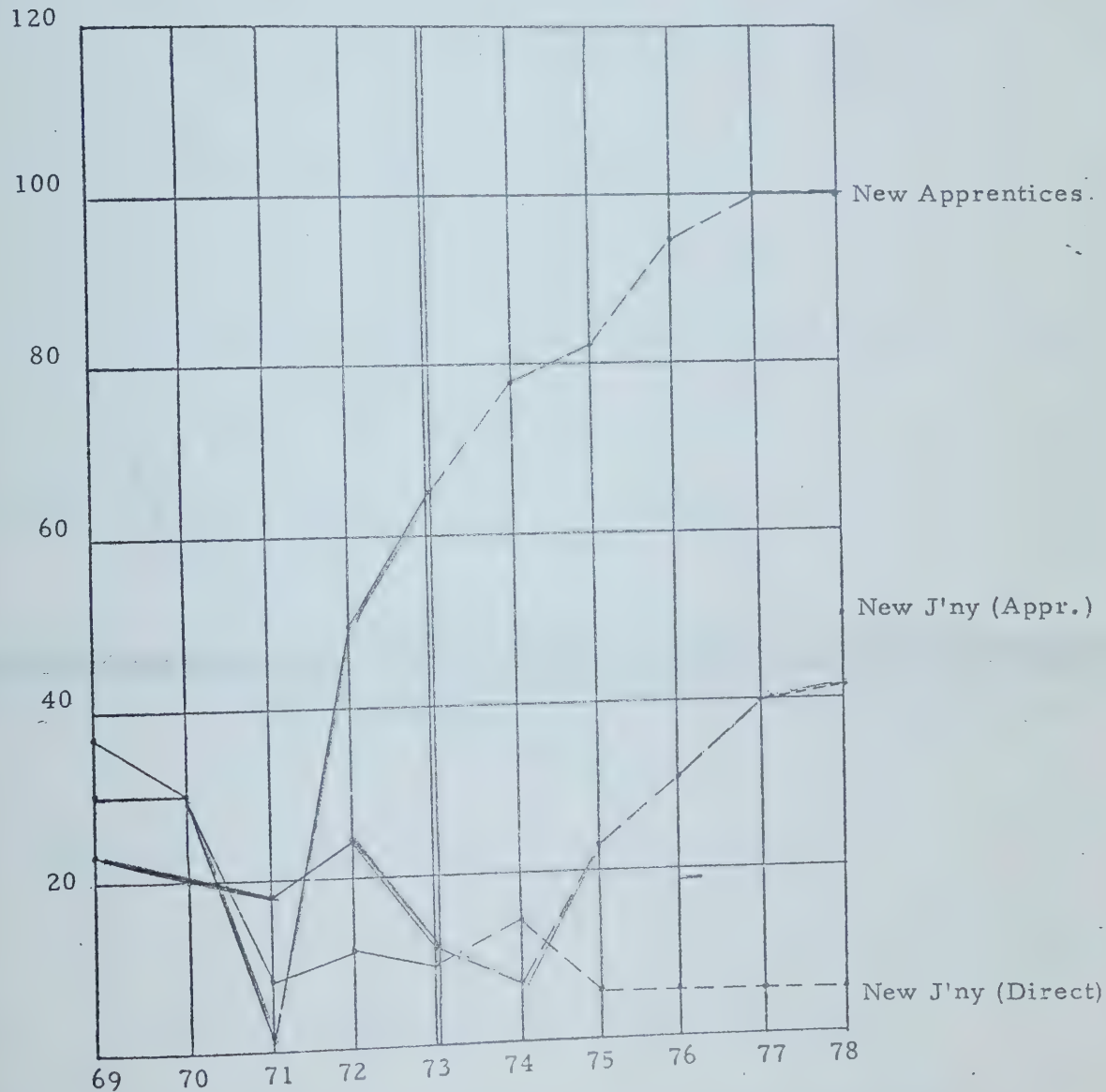
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	19	13	12	14	16	19	23	28	34	41
New J'ny. (Appr.)	5	7	5	12	6	9	12	14	16	20
New J'ny. (Direct)	167	6	3	4	4	14	18	20	15	15



Comments: Forecast - 239 increase by 1978 - 153 J'ny 86 Apprentices
Because of new staff members from the trade creating increased interest and support we predict an annual increase of 20% in new apprentices.

BRICKLAYER

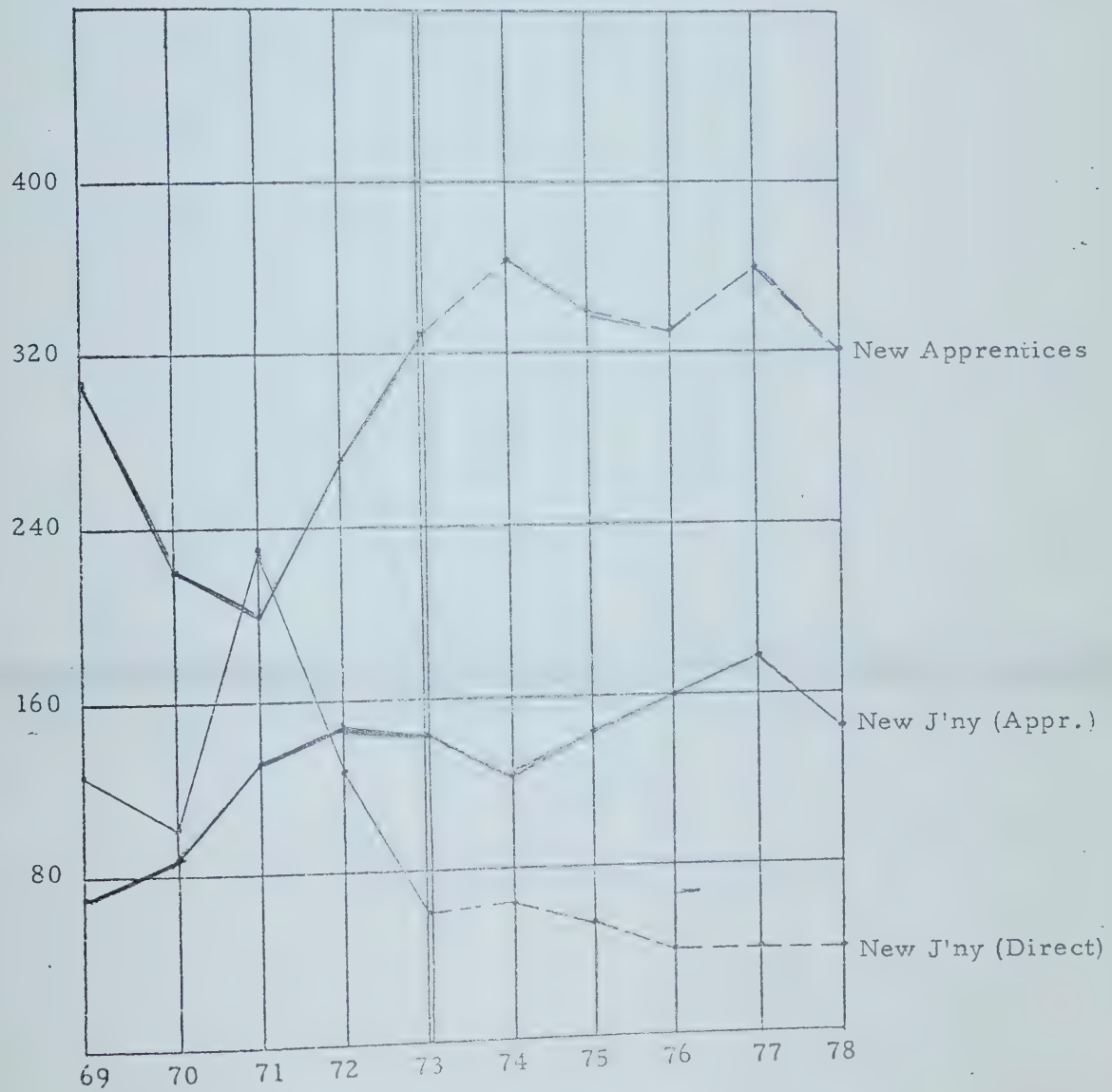
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	30	30	3	49	66	78	85	95	100	100
New J'ny. (Appr.)	22	20	19	23	16	14	22	36	40	45
New J'ny. (Direct)	38	30	9	12	11	18	8	8	8	8



Comments: Forecast - 435 increase by 1978 - 207 J'ny 228 Apprentices
Introduction of training at SAIT in addition to that at NAIT, together with promotional activity by industry organizations, and apparent demand, has created a sharp upswing. It is unlikely that this rate of increase will be sustained.

CARPENTERS

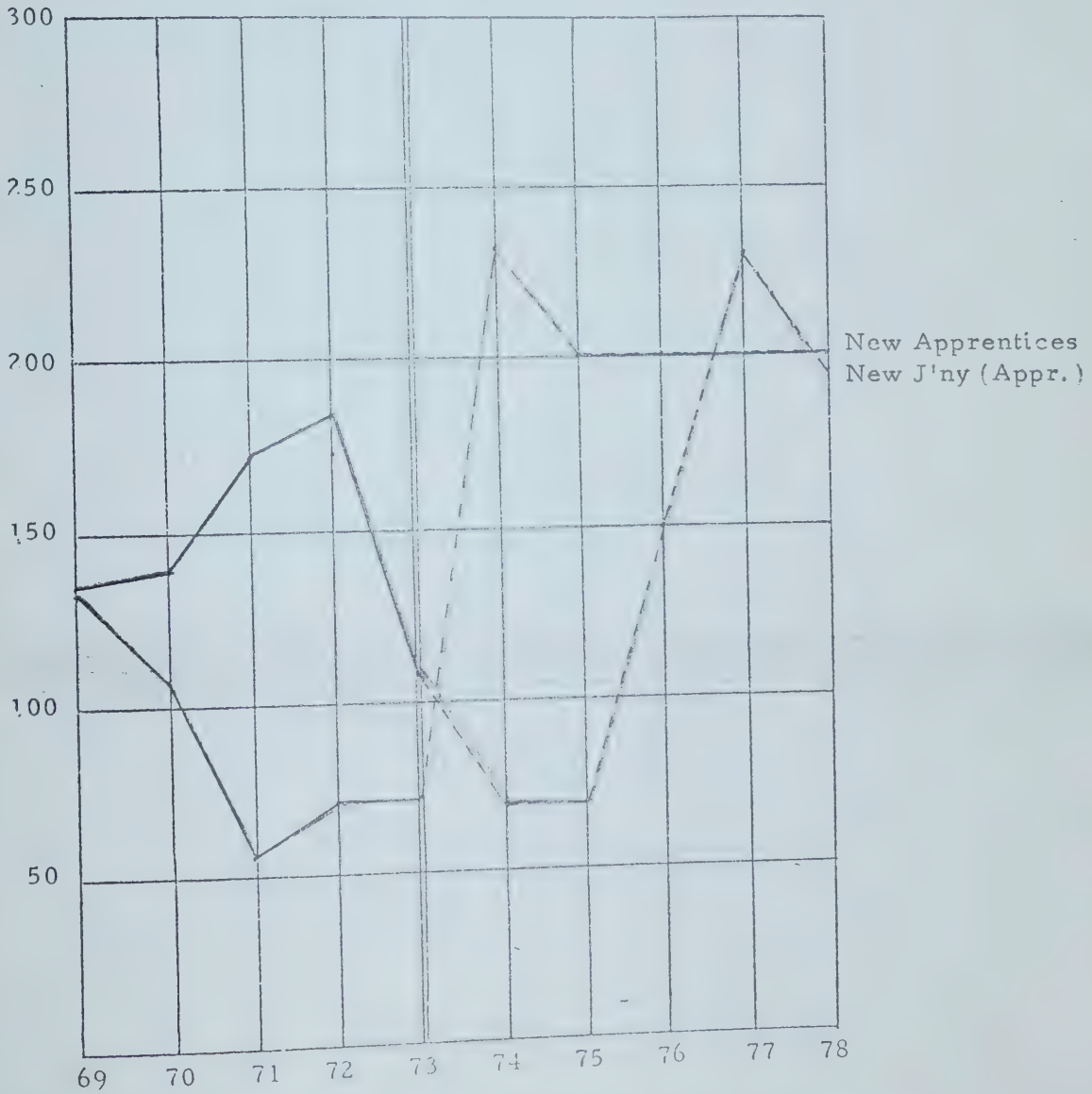
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	306	219	198	265	331	365	340	330	360	320
New J'ny. (Appr.)	66	91	128	145	139	120	140	160	180	140
New J'ny. (Direct)	121	104	229	122	67	60	50	40	40	40



Comments: Forecast - 1982 increase by 1978 - 970 J'ny 1012 Apprentices
We estimate that the total number of apprentices will increase during the forecast period due to industries needs for more tradesmen.

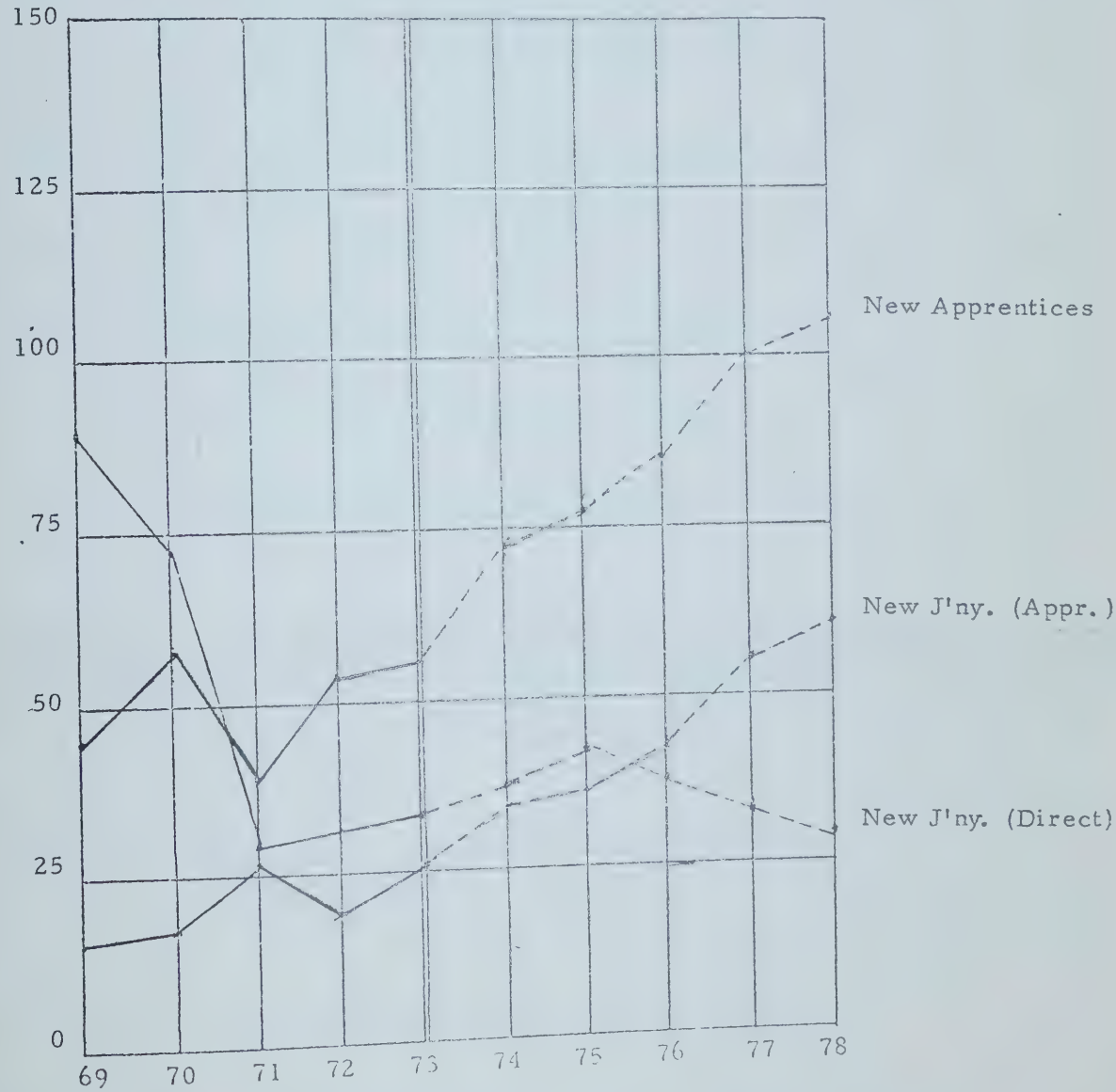
COMMUNICATION ELECTRICIAN

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	131	110	54	71	71	235	200	200	200	200
New J'ny. (Appr.)	134	138	172	182	109	70	70	150	230	195
New J'ny. (Direct)										



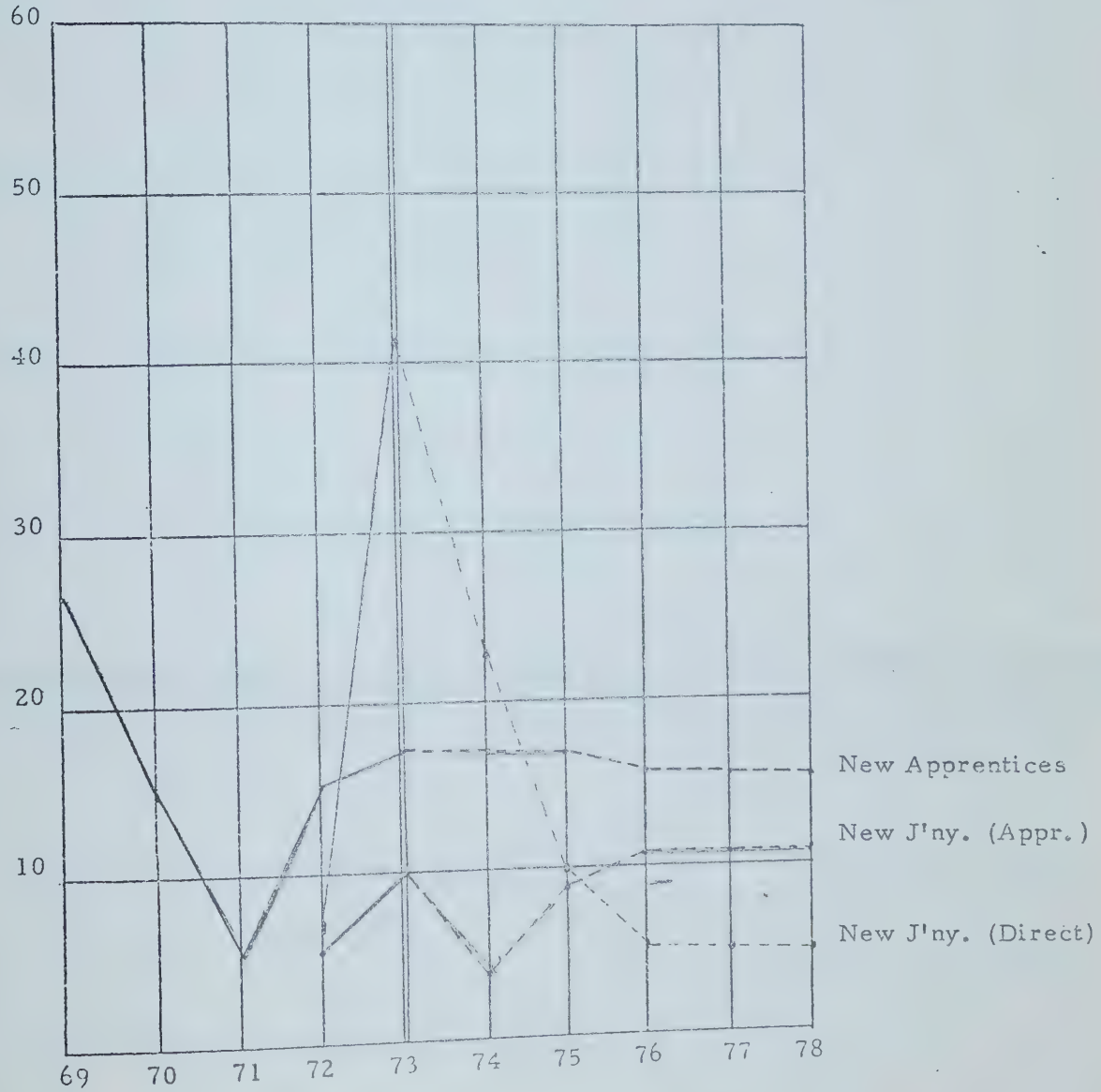
Comments: Forecast - 1490 increase by 1978 - 715 J'ny 775 Apprentices
Fluctuations in the number of apprentices indentured has been the result of the expansion of services within the industry. Forecasting is difficult due to this factor; however, the prediction for 1974 is reasonable as many of this number have already been indentured. There is no Journeyman Certification in this trade.

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	42	64	38	55	58	67	84	92	101	111
New J'ny. (Appr.)	16	17	27	19	26	36	38	44	55	60
New J'ny. (Direct)	87	72	30	32	34	40	45	40	35	30



Comments: Forecast - 605 increase by 1978 - 423 J'ny 182 Apprentices
Because of additions to staff of men from this trade, we predict an annual increase of 15% for 1974 and 1975 in apprentices, then levelling off to 10% annually through 1978.

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	26	15	6	14	17	17	17	16	16	16
New J'ny. (Appr.)				6	10	4	9	11	11	11
New J'ny. (Direct)				8	41	23	10	6	6	6

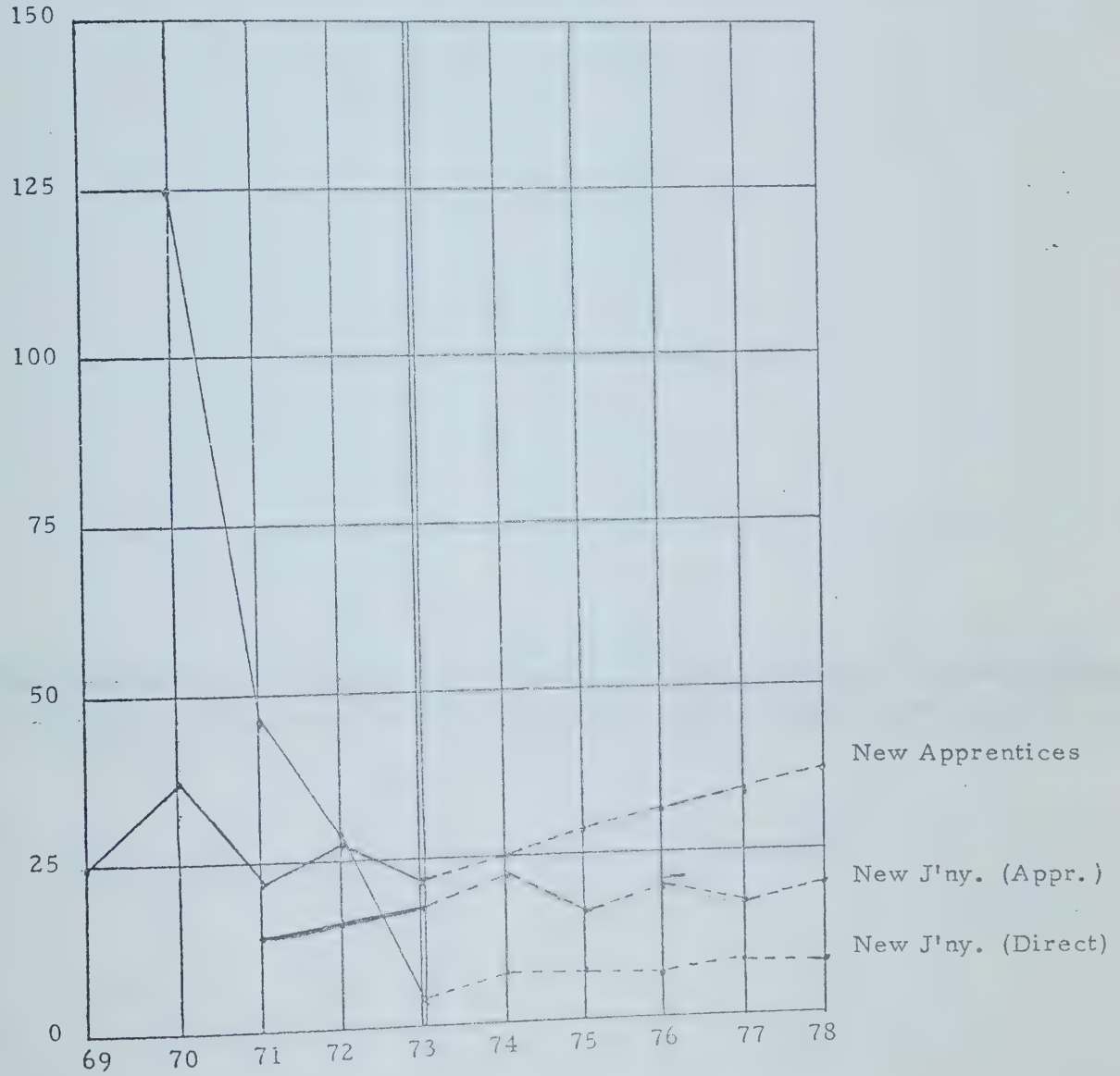


Comments: Forecast - 136 increase by 1978 - 97 J'ny 39 Apprentices. New apprentices forecast is based on the 2% increase from 1971 to 1974 period. New journeymen (direct) dropped sharply after the initial group of tradesmen were certified.

MANPOWER LIBRARY

FLOORCOVERING MECHANIC

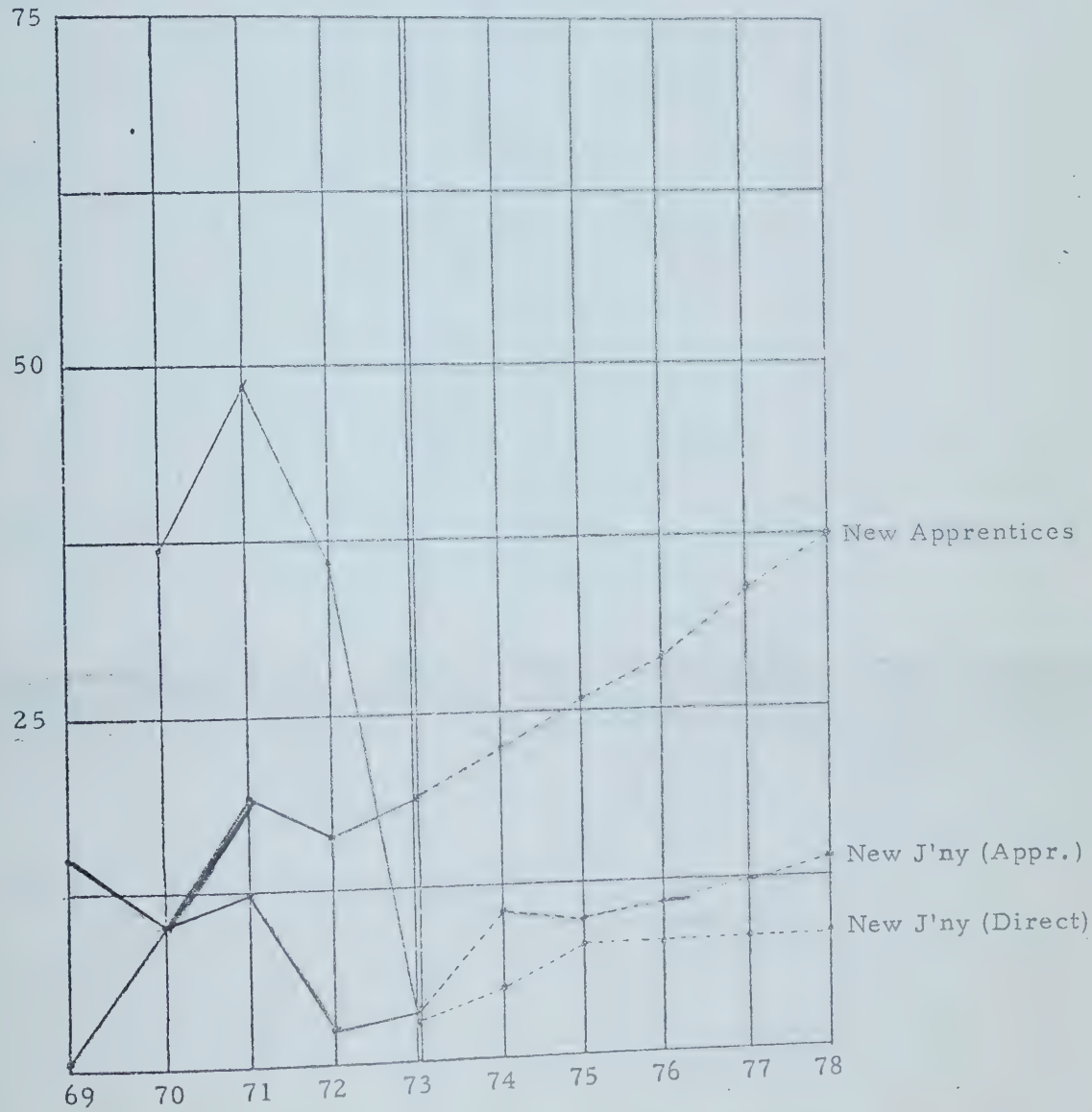
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	25	39	23	27	23	25	28	31	34	38
New J'ny. (Appr.)			14	17	18	23	16	20	18	20
New J'ny. (Direct)		125	46	28	6	10	10	10	12	12



Comments: Forecast - 229 increase by 1978 - 151 J'ny 78 Apprentices
Because of a possible change which will provide substantial technical training early in the apprenticeship with less training in senior years, we predict a 10% annual increase in apprentices.

GLASSWORKER

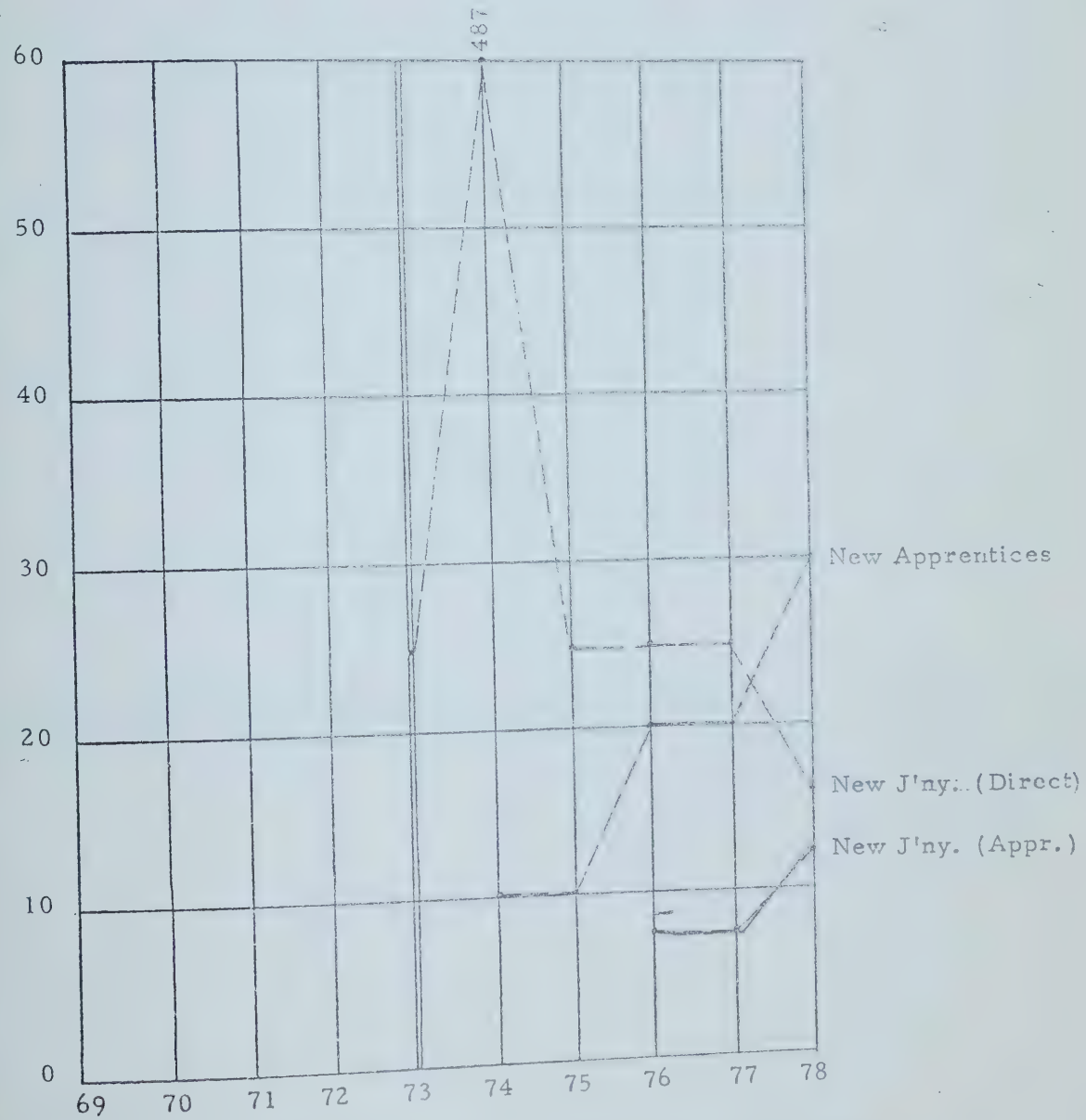
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	16	9	20	18	20	23	26	29	33	37
New J'ny. (Appr.)	2	9	12	4	5	10	9	10	12	14
New J'ny. (Direct)	-	36	47	35	4	6	8	8	8	8



Comments: Forecast - 179 increase by 1978 - 93 J'ny 86 Apprentices
We are assuming a 12% annual increase for new apprentices due to renewed industry support.

HEAVY EQUIPMENT OPERATOR

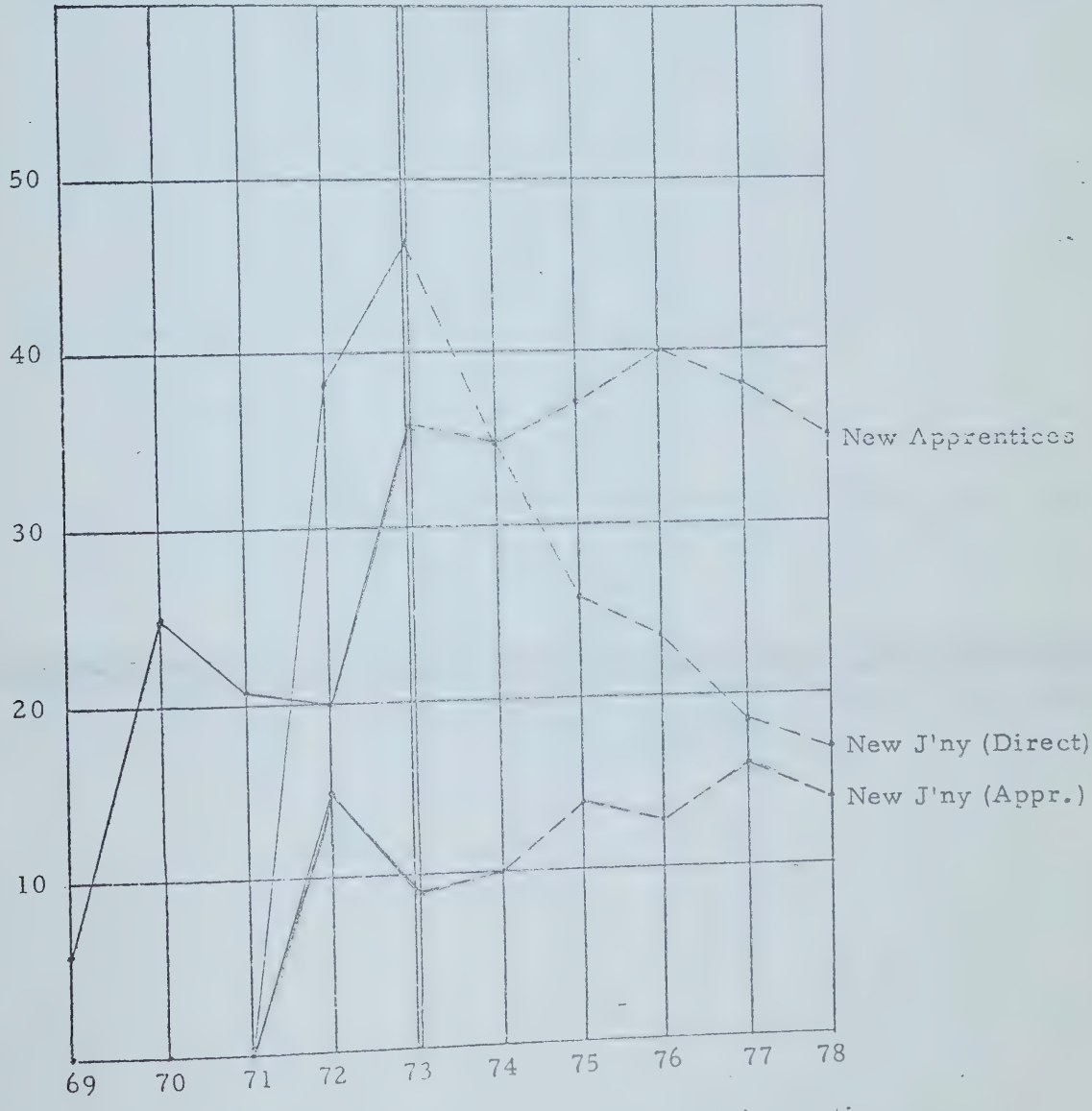
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices						10	15	20	20	30
New J'ny. (Appr.)								8	8	12
New J'ny. (Direct)					25	487	25	25	25	16



Comments: Forecast - 158 increase by 1978 - 91 J'ny 67 Apprentices
A new program for Crane & Hoisting Equipment Operators, which started with voluntary certification has received outstanding support from industry - 487 certificates issued to date. Training will commence in 1975 for new apprentices and it is forecast that the program will be well received.

INSTRUMENT MECHANIC

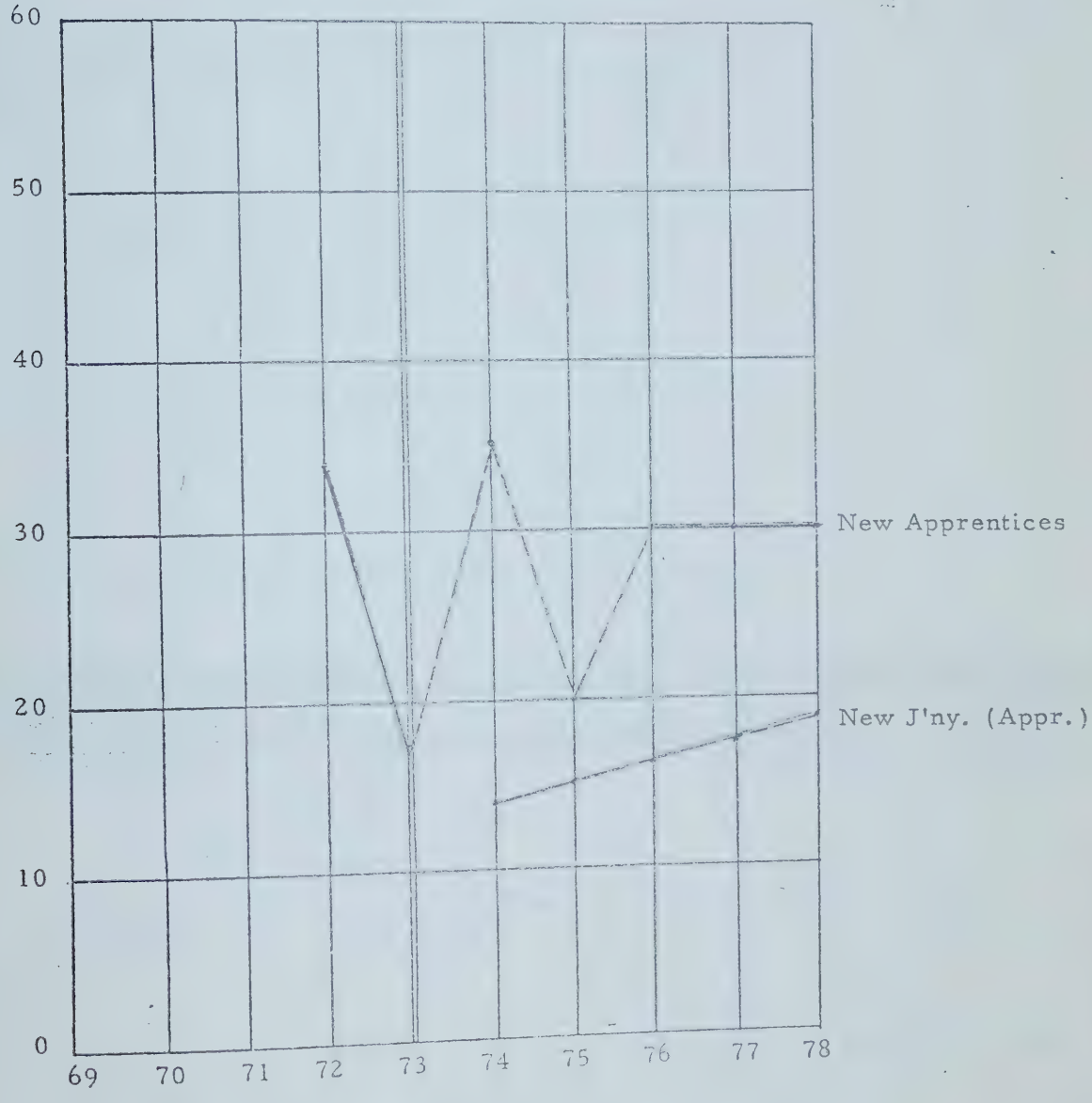
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	6	25	21	20	36	35	37	40	38	35
New J'ny. (Appr.)				15	9	10	14	13	16	14
New J'ny. (Direct)				38	46	35	26	24	18	17



Comments: Forecast - 277 increase by 1978 - 187 J'ny 90 Apprentices
Relatively small in numbers; both in apprenticeship and certification.
There is no apparent reason to predict substantial changes.

INSULATOR

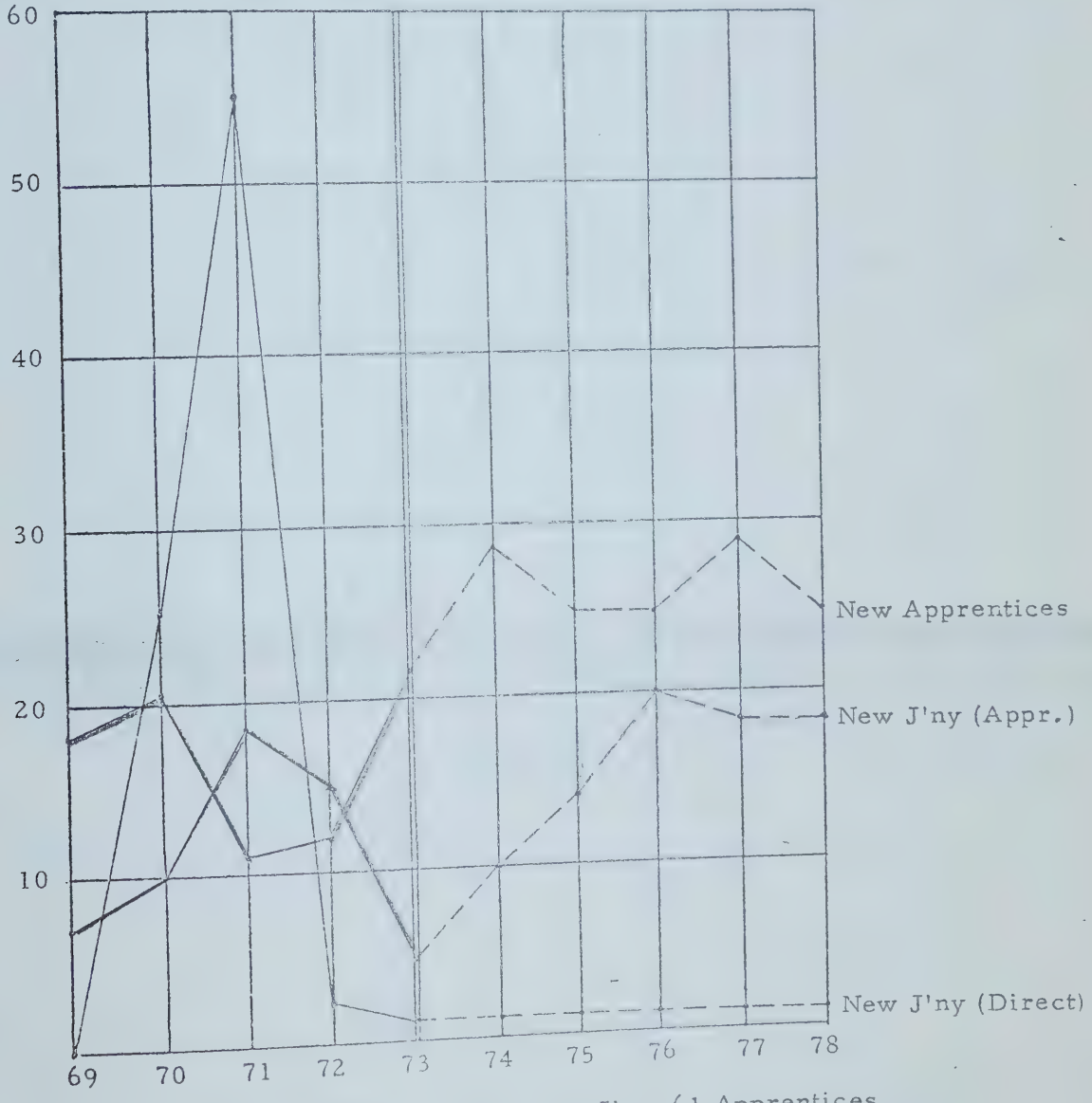
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices				34	17	35	30	30	30	30
New J'ny. (Appr.)						14	15	16	17	18
New J'ny. (Direct)										



Comments: Forecast - 130 increase by 1978 - 60 J'ny 70 Apprentices
There is no certification for journeymen. The industry practice of engaging "improvers" has hindered the apprenticeship program.

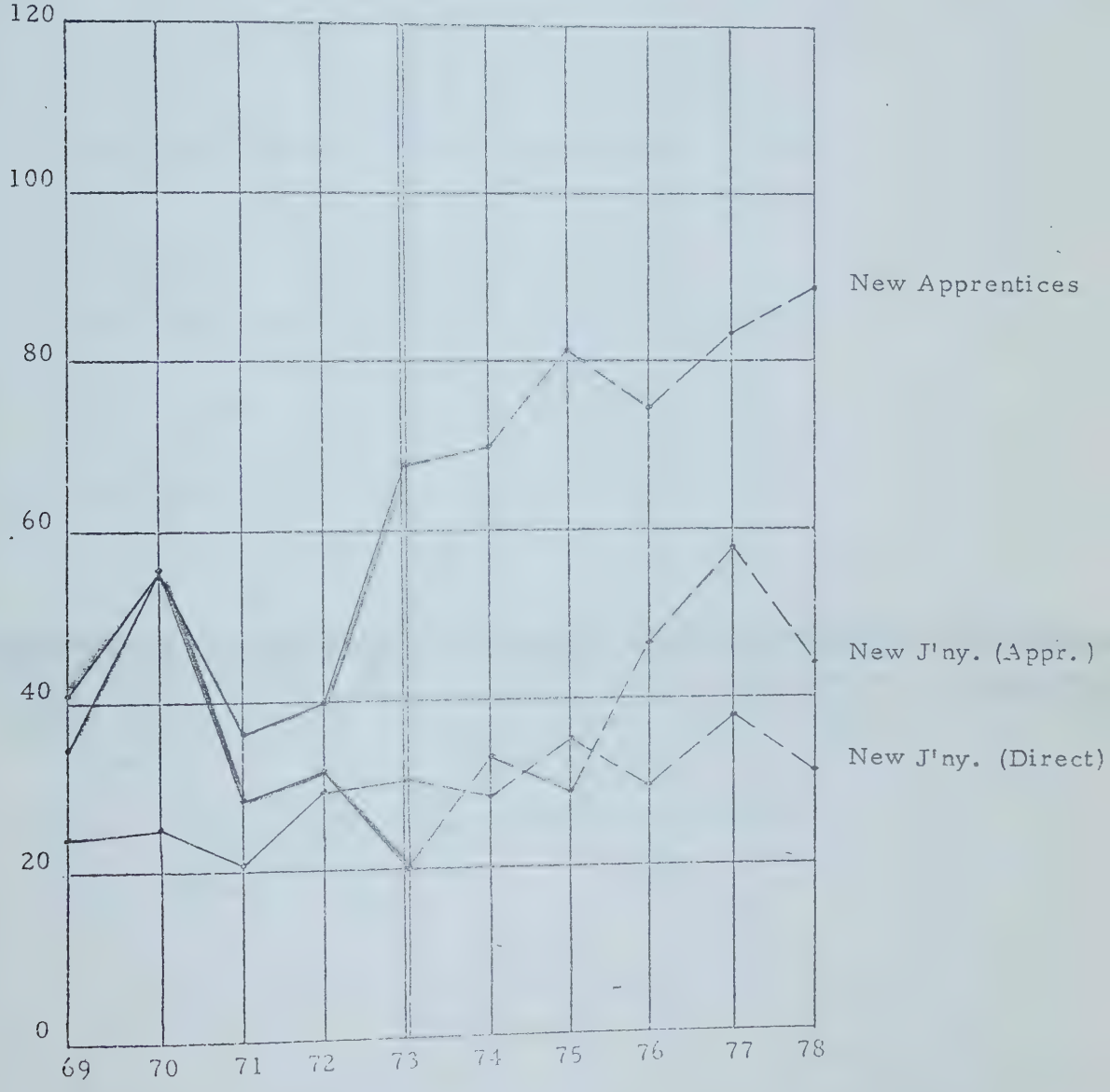
LATHER

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	18	21	12	13	22	28	25	25	28	25
New J'ny. (Appr.)	7	10	18	15	5	10	14	20	18	18
New J'ny. (Direct)	-	25	55	3	2	2	2	2	2	2



Comments: Forecast - 151 increase by 1978 - 90 J'ny 61 Apprentices
Reasonable stability may be expected.

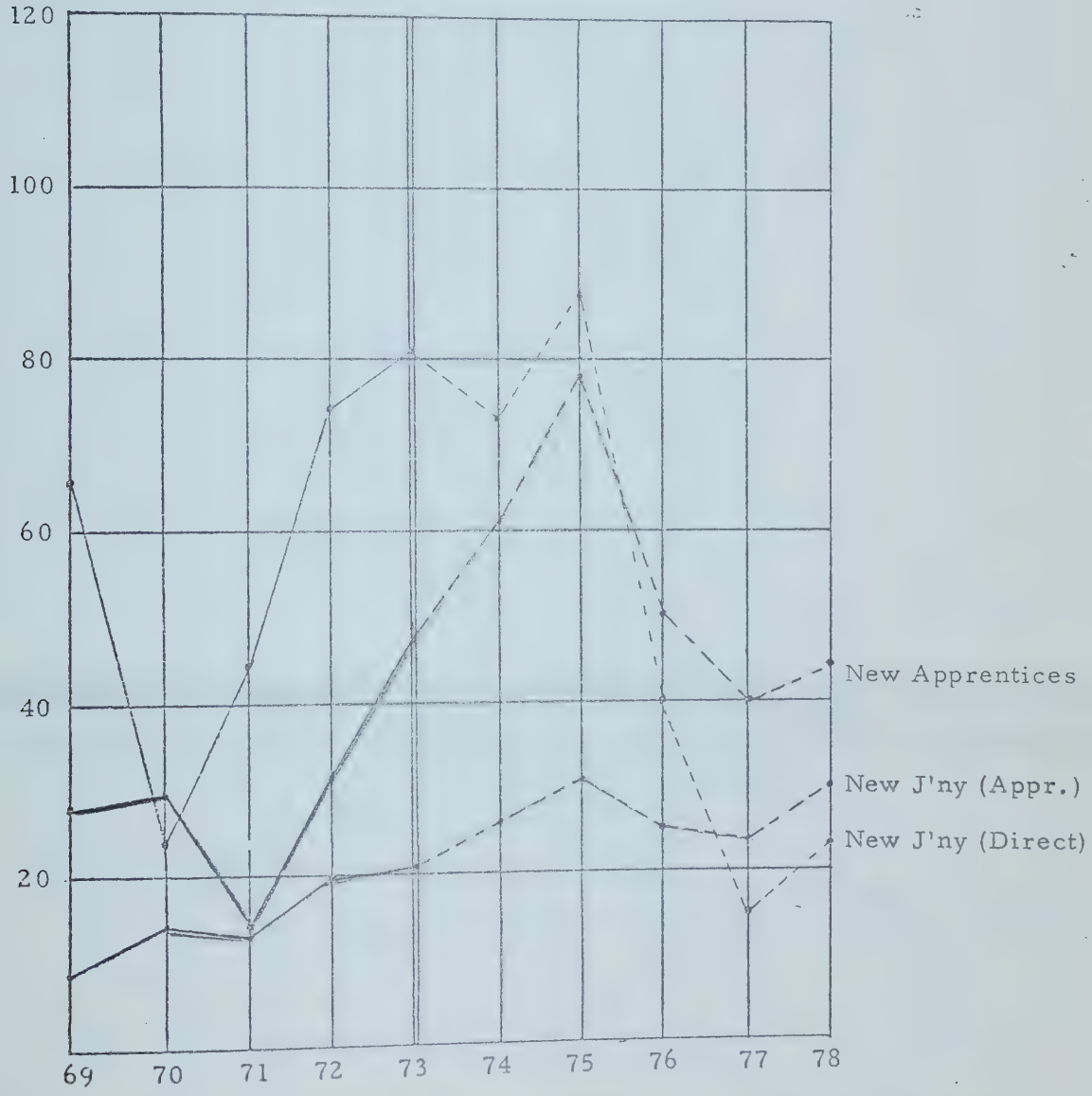
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	36	56	37	40	67	70	81	75	83	89
New J'ny. (Appr.)	41	56	29	33	20	35	30	46	58	44
New J'ny. (Direct)	25	26	21	30	31	29	36	30	38	32



Comments: Forecast - 619 increase by 1978 - 378 J'ny 241 Apprentices
This forecast is very speculative. At present, development in the trade is relatively minor. There may be need for "operator" training, which, if introduced, could lead to the increased numbers shown for 1975 to 1978.

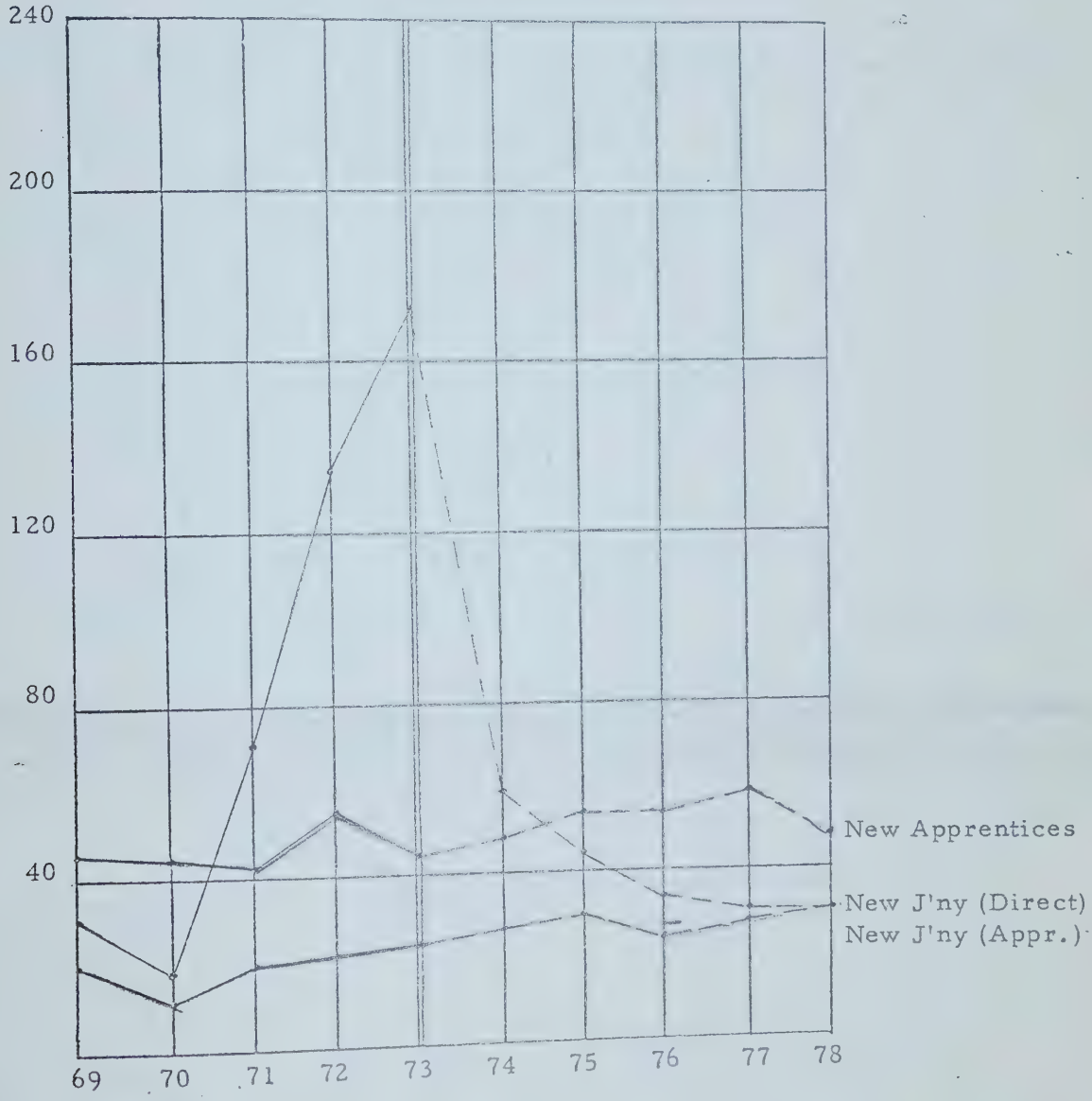
MILLWRIGHT

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	29	30	15	32	47	62	78	51	40	45
New J'ny. (Appr.)	9	15	14	20	21	26	33	25	23	30
New J'ny. (Direct)	65	23	44	76	81	74	87	40	15	22



Comments: Forecast - 503 increase by 1978 - 375 J'ny 128 Apprentices
Construction of industrial complexes will probably increase the demand for Journeyman, both in construction and ultimately in maintenance. Because the majority of apprentices come through the plant maintenance stream, there is likely to be a lag in apprentice increase, which increase may develop as an increasing number of construction Millwrights accept maintenance positions in new plants.

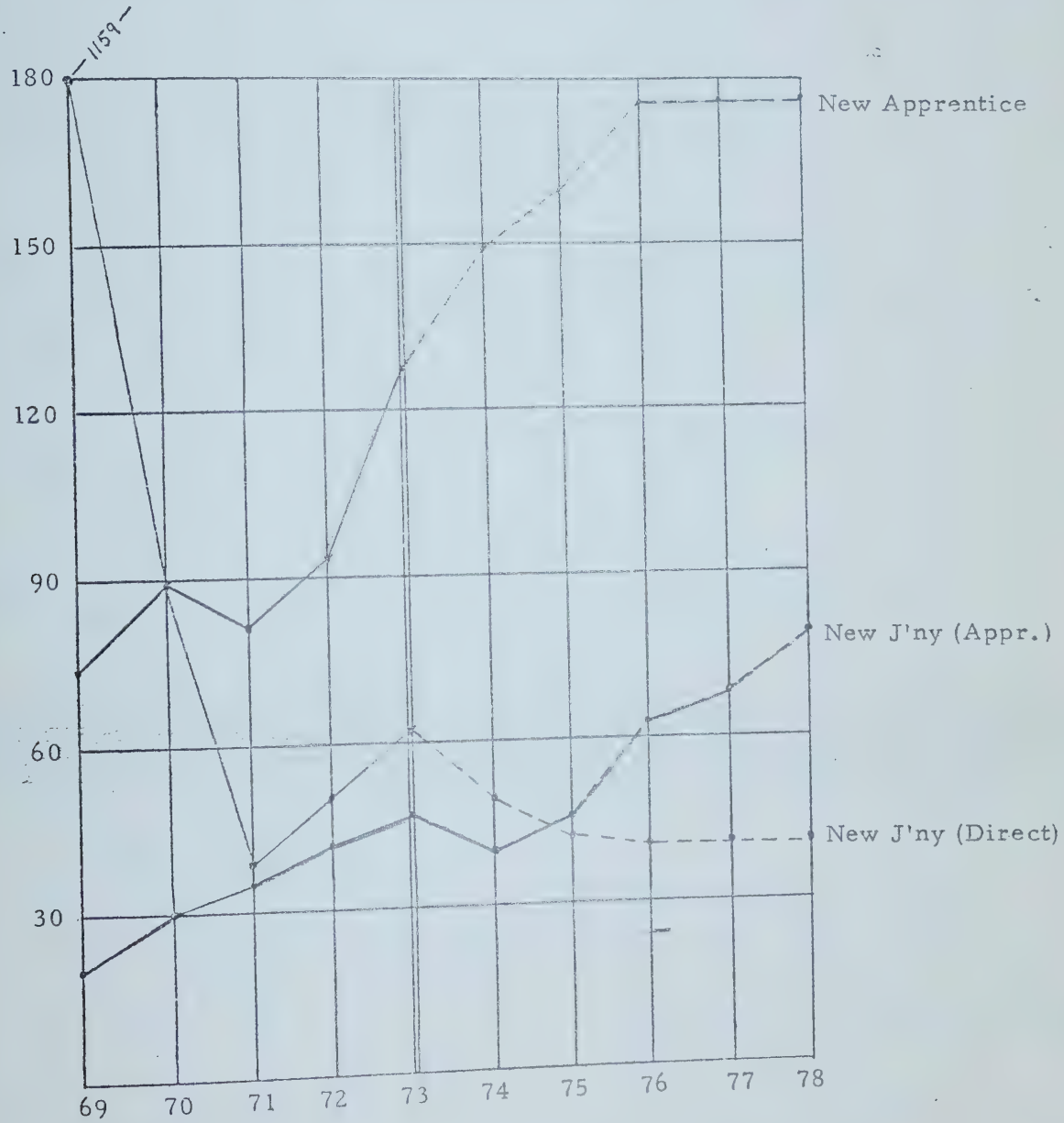
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	46	45	42	56	45	50	55	55	60	50
New J'ny. (Appr.)	21	14	21	22	24	26	30	24	28	30
New J'ny. (Direct)	31	19	72	135	174	60	45	35	30	30



Comments: Forecast - 493 increase by 1978 - 338 J'ny 155 Apprentices
The sharp increase in certificated journeymen reflects compulsory licensing in the city of Calgary and industry encouragement for certification, rather than an influx of workers.

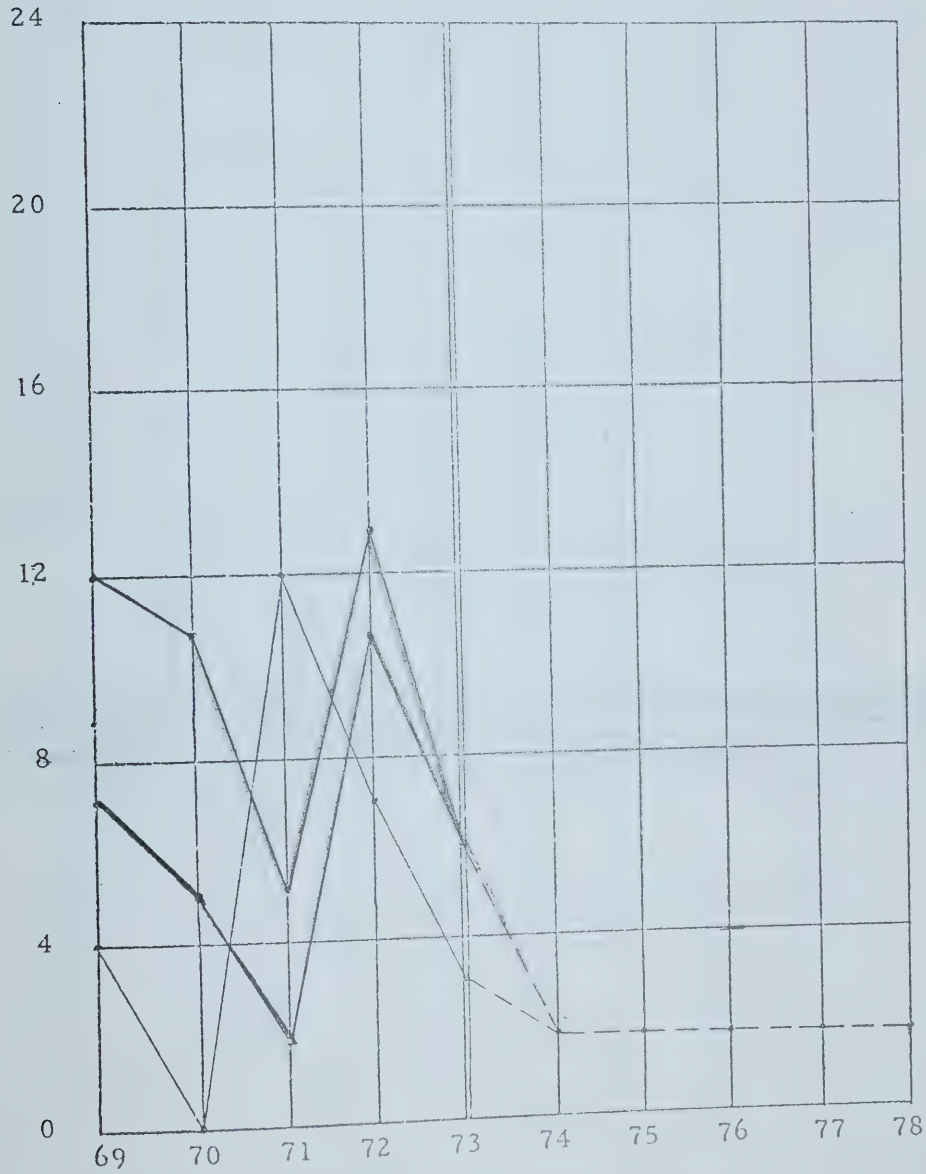
PARTSMAN

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	74	89	80	93	128	149	151	177	177	177
New J'ny. (Appr.)	20	30	35	42	47	40	46	64	71	80
New J'ny. (Direct)	1159	89	36	50	62	50	42	40	40	40



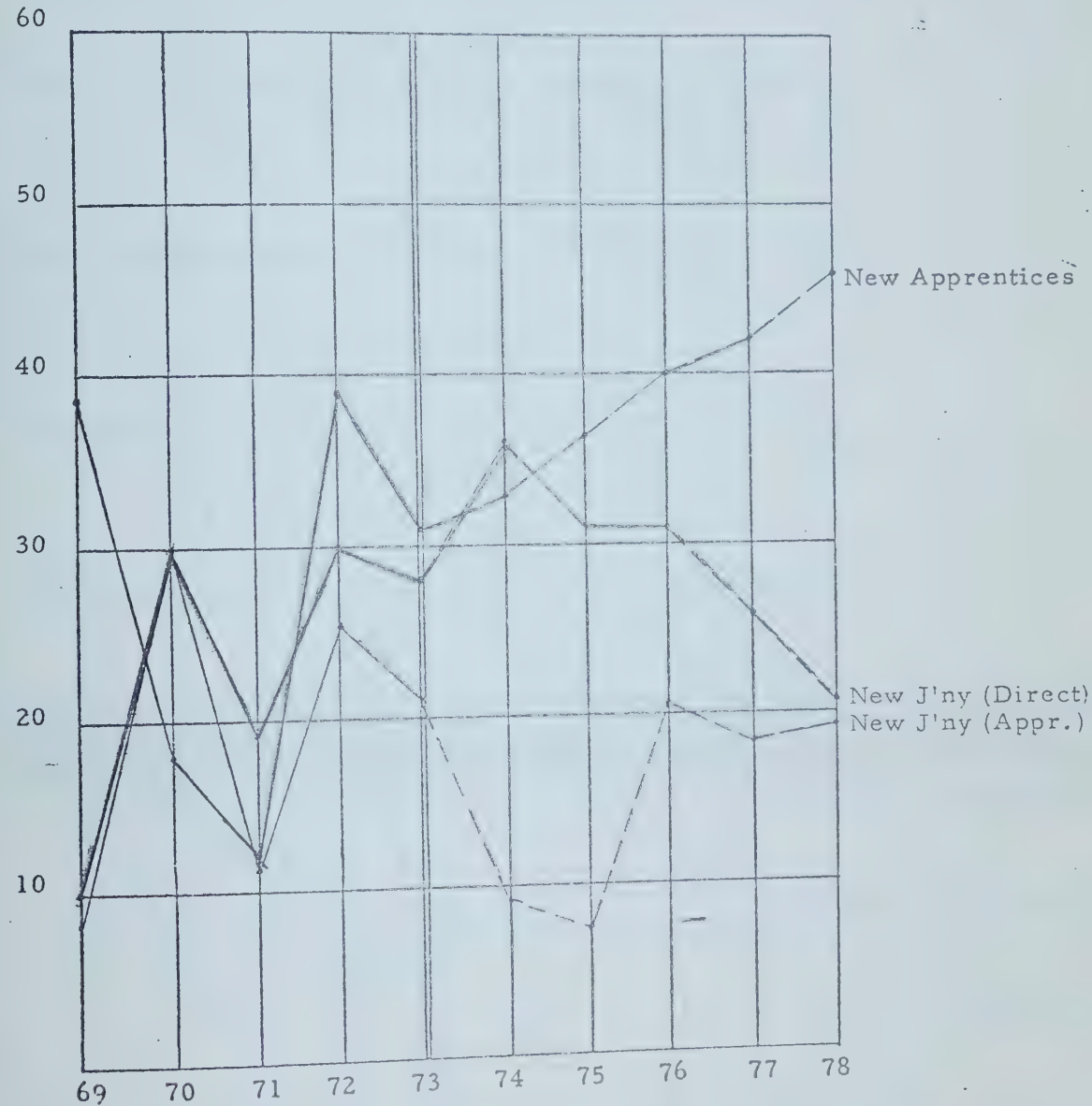
Comments: Forecast - 890 increase by 1978 - 513 J'ny 377 Apprentices
The sharp forecast increase in new apprentices is based upon the recent interest of industries which have hitherto not supported the training program. It may be anticipated that a number of secondary industries will follow the trend started in 1974.

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	12	10	5	13	6					
New J'ny. (Appr.)	7	5	2	10	6	2				
New J'ny. (Direct)	4	0	12	7	3	2	2	2	2	2



Comments: Apprenticeship Training and registration of Apprentices is no longer in effect. Minimum activity is expected in Journeyman certification.

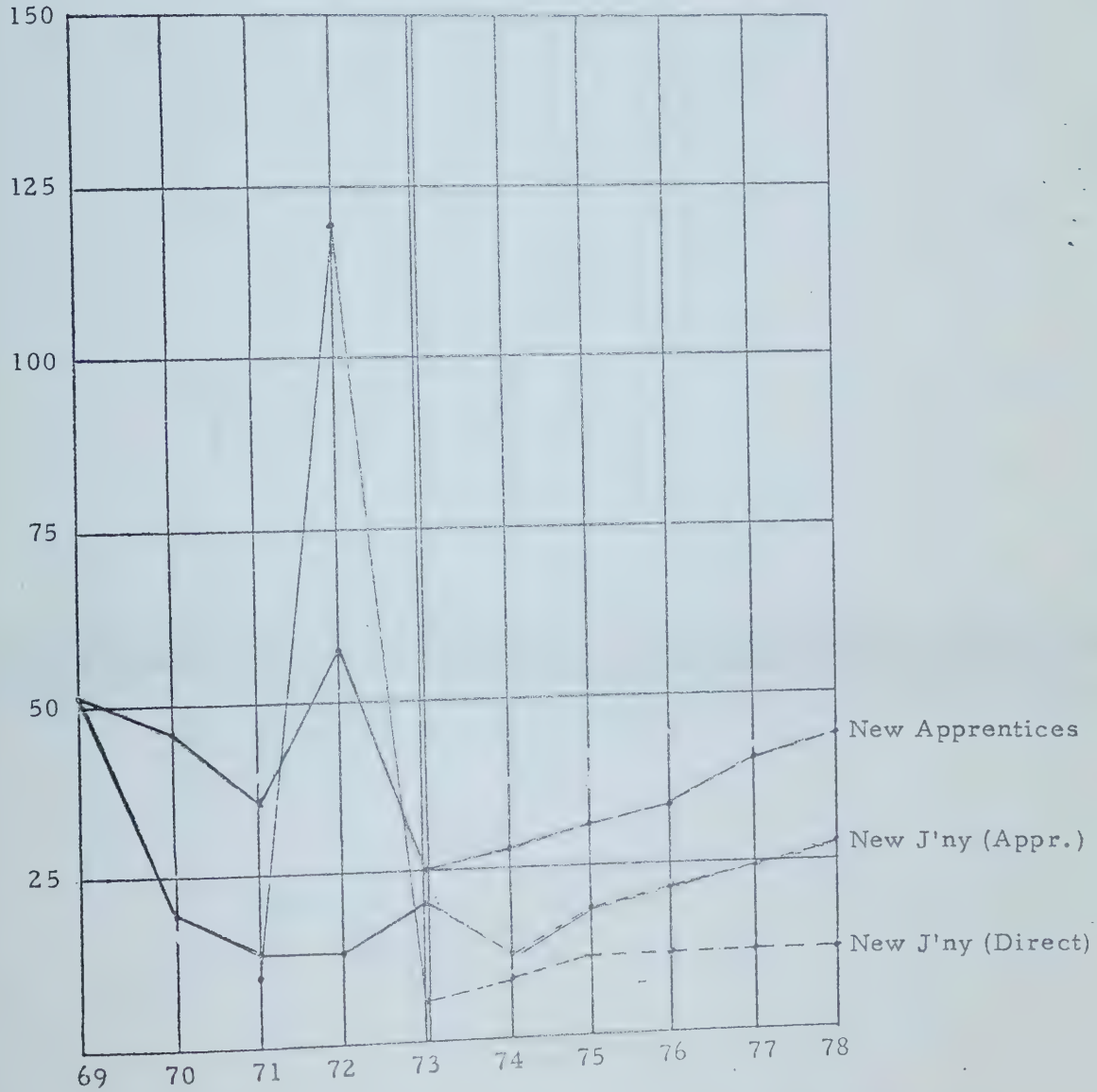
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	38	17	13	38	32	34	37	40	43	46
New J'ny. (Appr.)	10	30	12	26	22	9	7	21	18	19
New J'ny. (Direct)	8	30	19	30	28	36	32	32	26	21



Comments: Forecast - 346 increase by 1978 - 221 J'ny 125 Apprentices
On-going new construction should justify the 7% annual increase estimated for new apprentices. With certification introduced in 1968, the majority of local tradesmen are certificated, therefore the New Journeymen (Direct) category is likely to diminish.

ROOFER

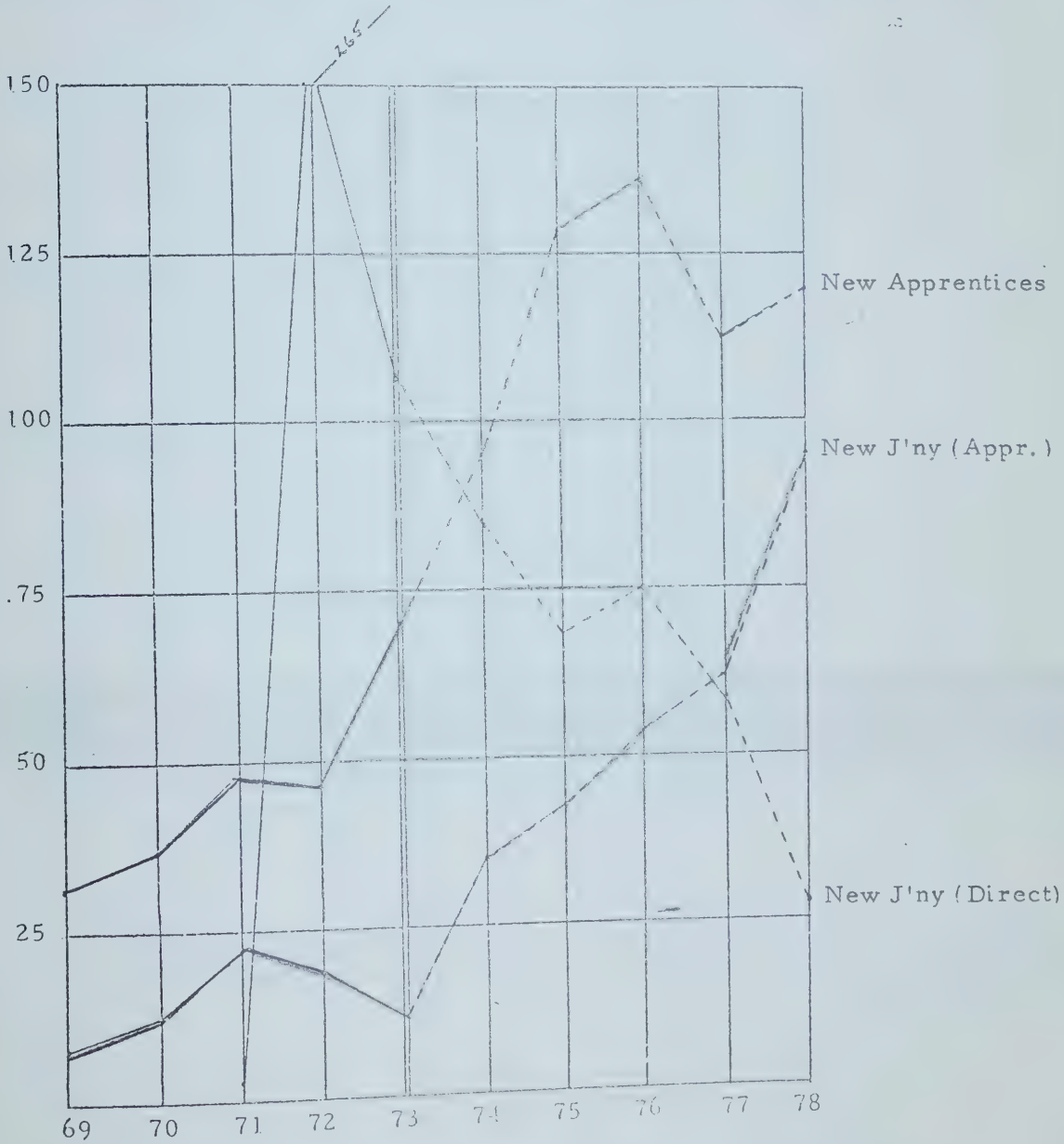
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	53	45	32	61	25	28	31	35	39	43
New J'ny. (Appr.)	53	18	14	14	19	13	18	20	24	28
New J'ny. (Direct)	-	-	12	116	8	10	12	12	12	12



Comments: Forecast - 259 increase by 1978 - 161 J'ny 98 Apprentices
We are assuming the downward trend for new apprentices will be arrested due to the expected expansion in the work force, with a resulting annual increase of 10%.

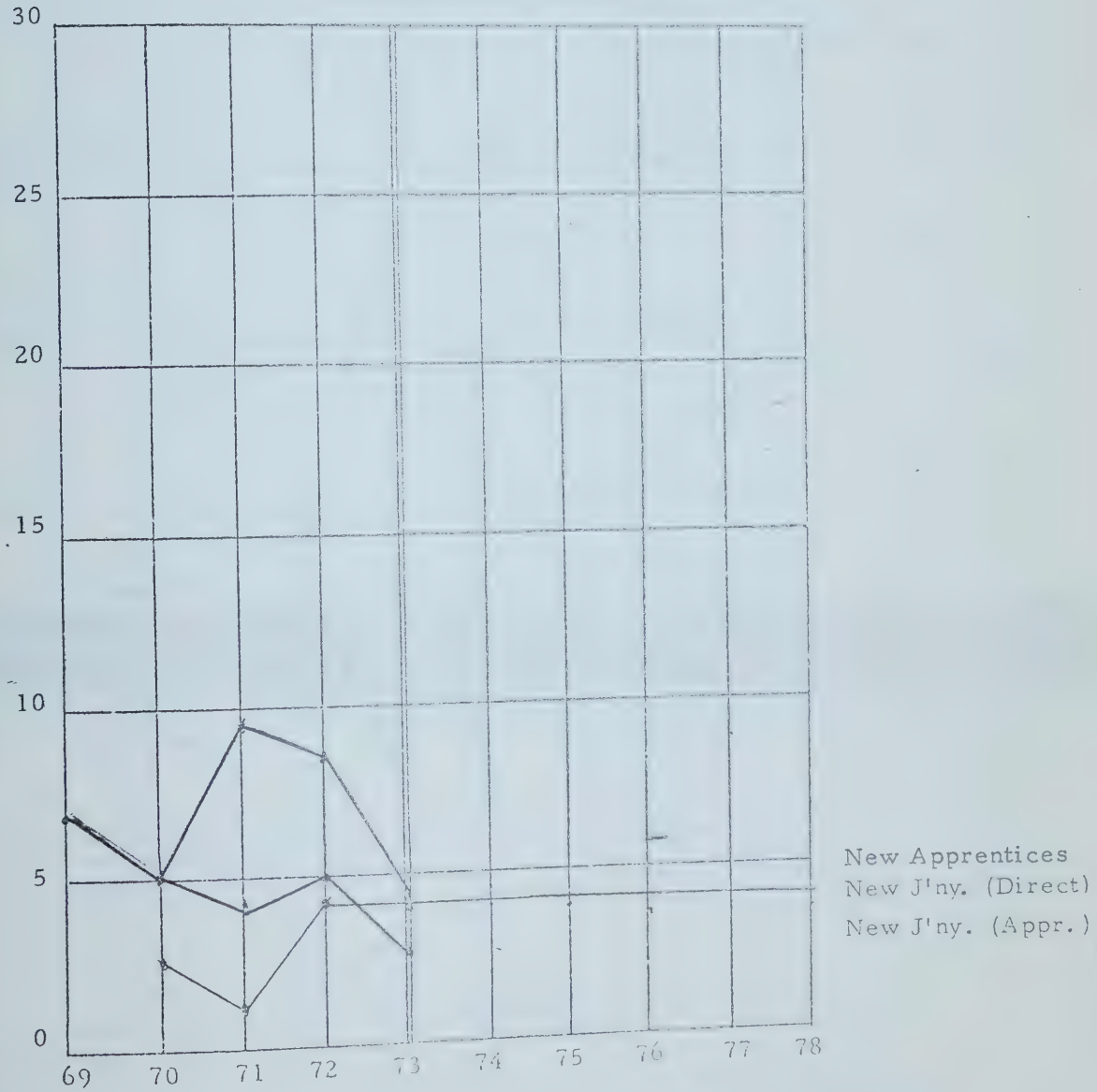
STEEL FABRICATOR

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	30	37	47	45	70	91	130	138	115	120
New J'ny. (Appr.)	8	15	21	19	14	35	40	56	66	91
New J'ny. (Direct)	-	-	5	265	108	65	70	75	61	28



Comments: Forecast - 830 increase by 1978 - 607 J'ny 223 Apprentices
The trade encompasses Ironworkers and Boilermakers represented by several unions, with some resulting jurisdictional problems. New plant construction may drain new workers but this is unlikely to be reflected in an equivalent number of new apprentices, or of journeymen

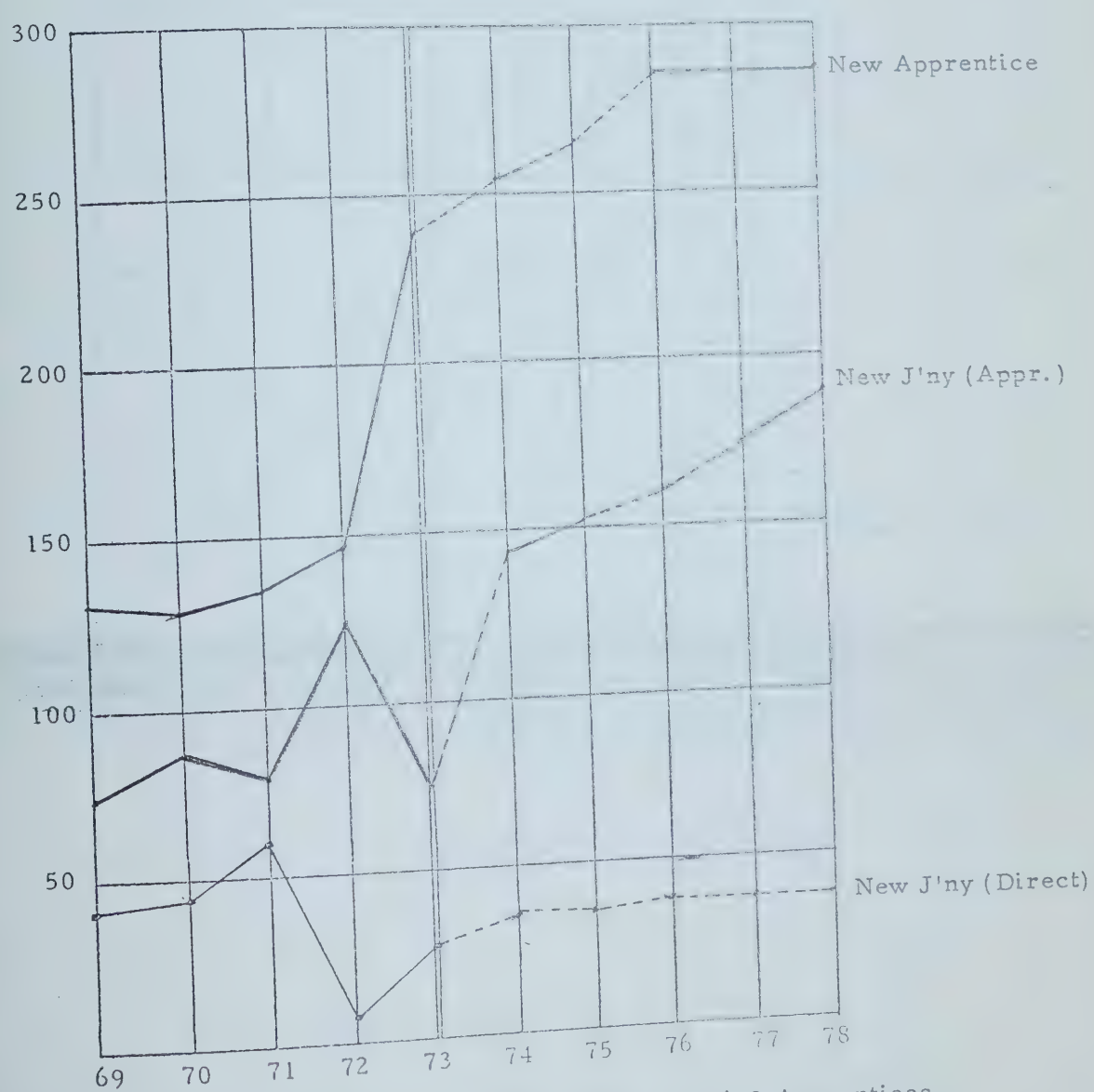
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	7	5	9	5	4					
New J'ny. (Appr.)	7	5	4	5	3					
New J'ny. (Direct)		3	2	4	4	4	4	4	4	4



Comments: Apprenticeship Training has been suspended.

AUTO BODY MECHANIC

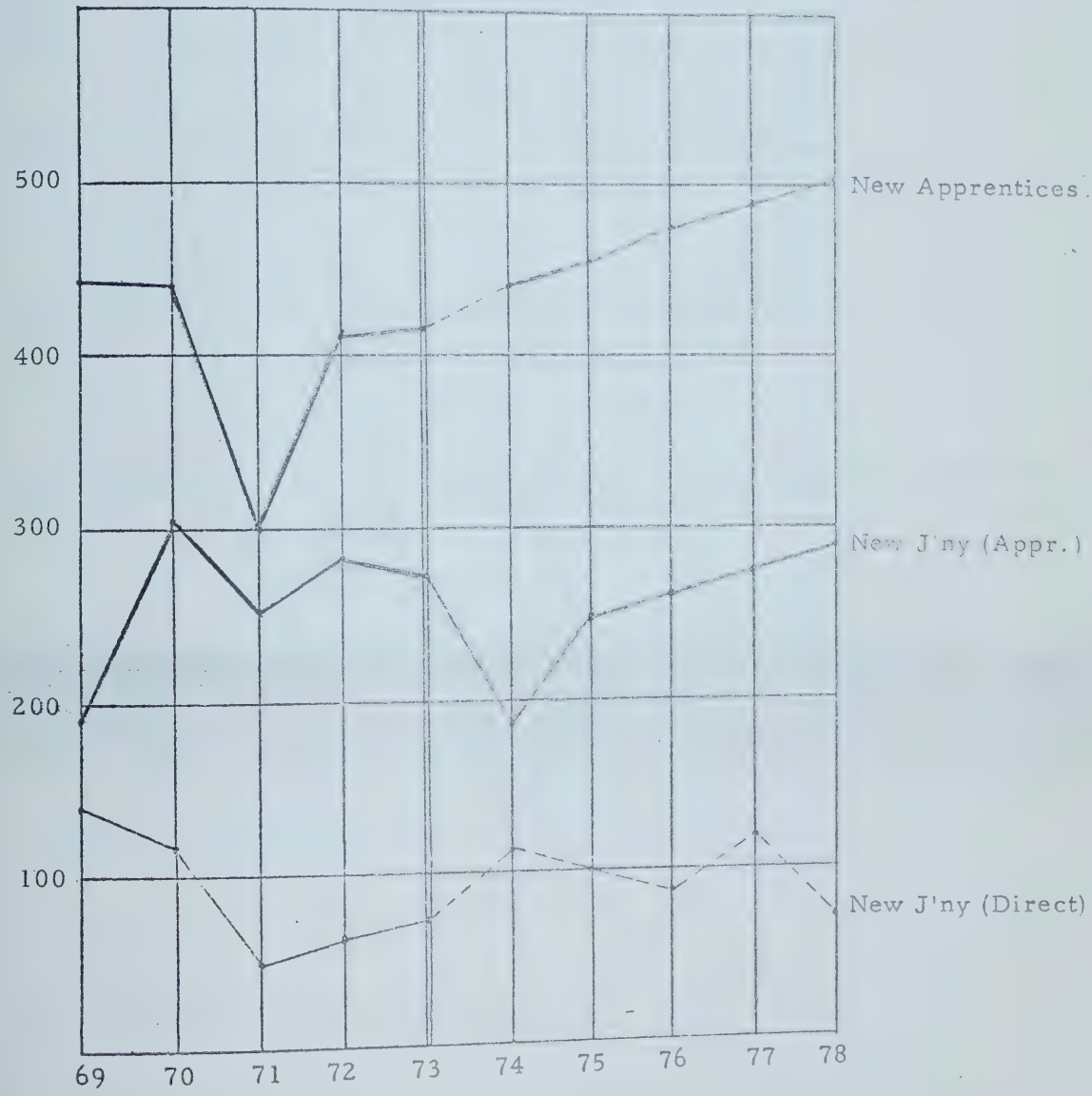
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	133	132	137	147	240	255	268	284	284	284
New J'ny. (Appr.)	74	86	79	131	73	143	151	159	176	185
New J'ny. (Direct)	43	47	61	9	29	36	34	36	36	36



Comments: Forecast - 1664 increase by 1978 - 992 J'ny 672 Apprentices
The projected increase is based on a severe shortage within the industry and anticipated dramatic changes in the skill demands by 1978, which may require the adoption of a new concept of the Auto Body Mechanic.

ELECTRICIAN

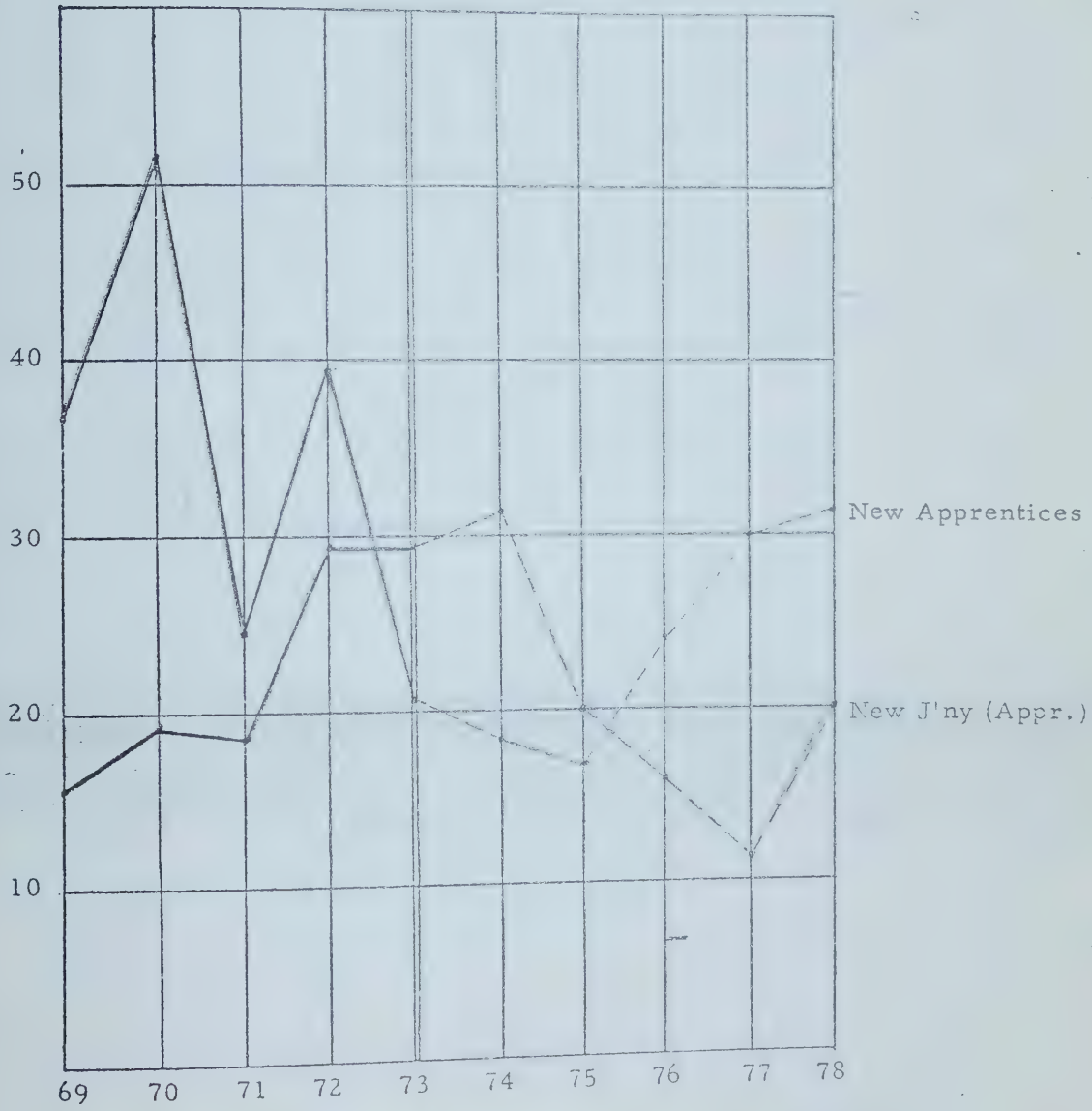
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	443	442	300	418	420	443	464	433	489	505
New J'ny. (Appr.)	197	302	246	254	278	190	204	270	279	290
New J'ny. (Direct)	140	121	54	65	71	115	100	85	120	70



Comments: Forecast - 3328 increase by 1978 - 1783 J'ny 1545 Apprentices
Projection based on a long time steady increase of 3.3% per year.

GASFITTERS

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	37	52	25	39	21	18	16	24	30	32
New J'ny. (Appr.)	16	19	18	29	29	32	20	16	12	20
New J'ny. (Direct)										

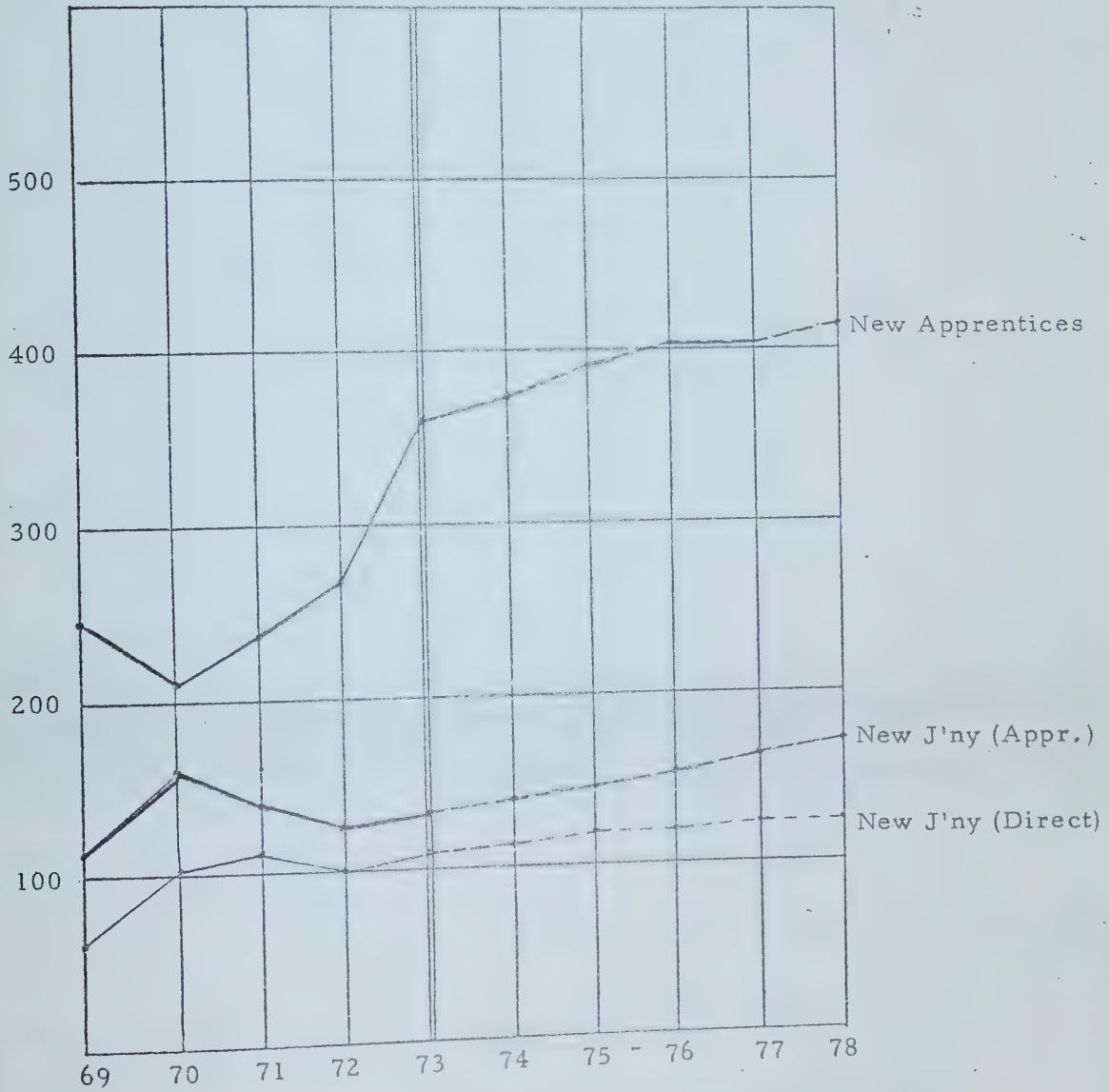


Comments: Forecast - 177 increase by 1978 - 100 J'ny 77 Apprentices

Chart represents Gasfitters primarily engaged in the propane distribution industry. The trade has, in addition, Gasfitters whose primary trade is Plumbing or Steamfitting. New apprentices in 1974 and 1975 may decrease because of the program to convert rural areas to natural gas and increase after this program has stabilized.

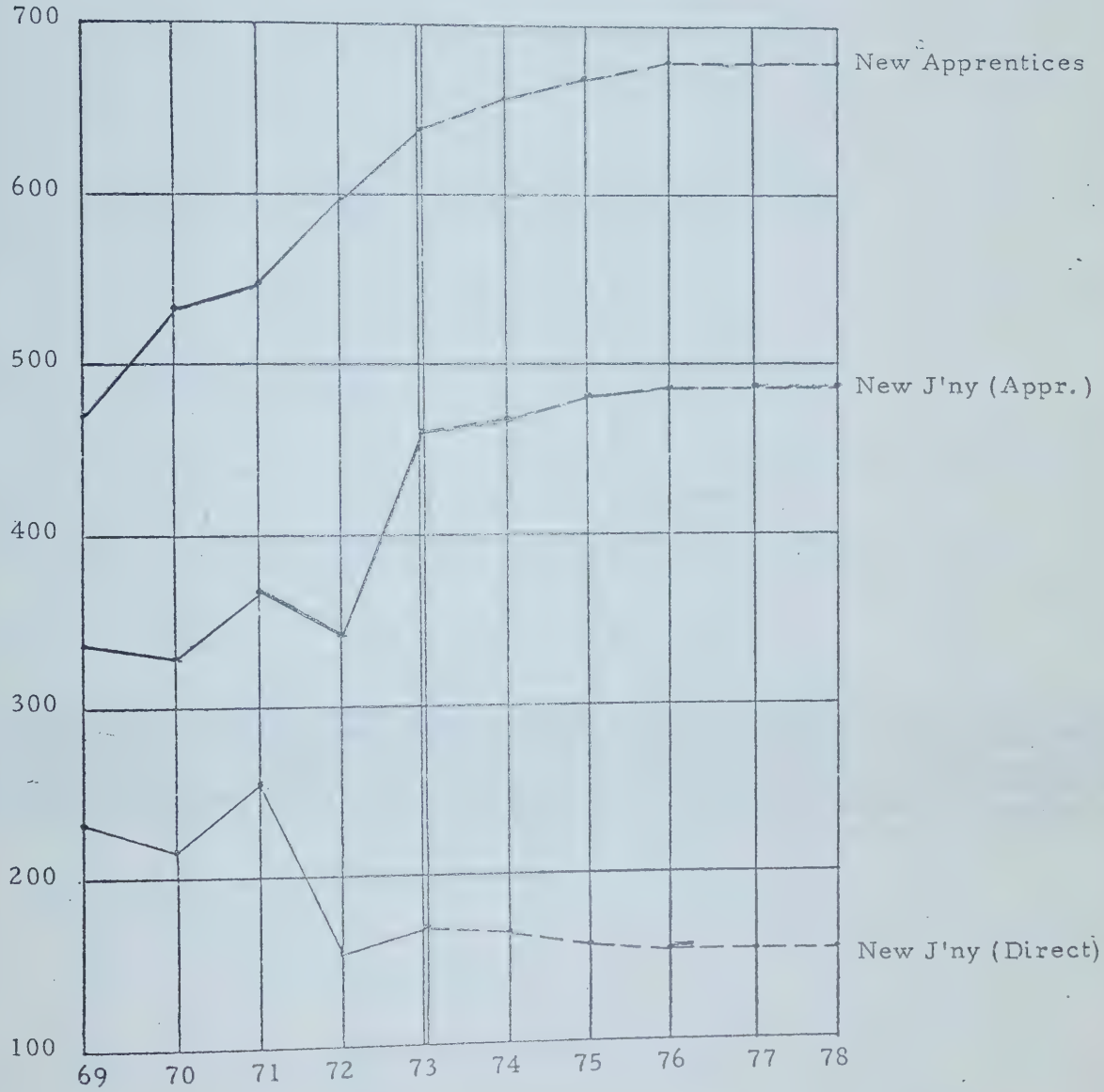
HEAVY DUTY MECHANIC

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	245	217	243	276	364	379	391	402	402	416
New J'ny. (Appr.)	118	168	144	129	137	140	142	151	159	165
New J'ny. (Direct)	68	101	111	100	106	110	114	114	116	116



Comments: Forecast - 2293 increase by 1978 - 1327 J'ny 966 Apprentices
Due to a contibuting flow from other mechanic trades, e.g. Motor Mechanic and Agricultural Mechanic, the overall work force may increase almost equal to the new apprentice growth rate - an estimated 15% of journeymen hold dual certification.

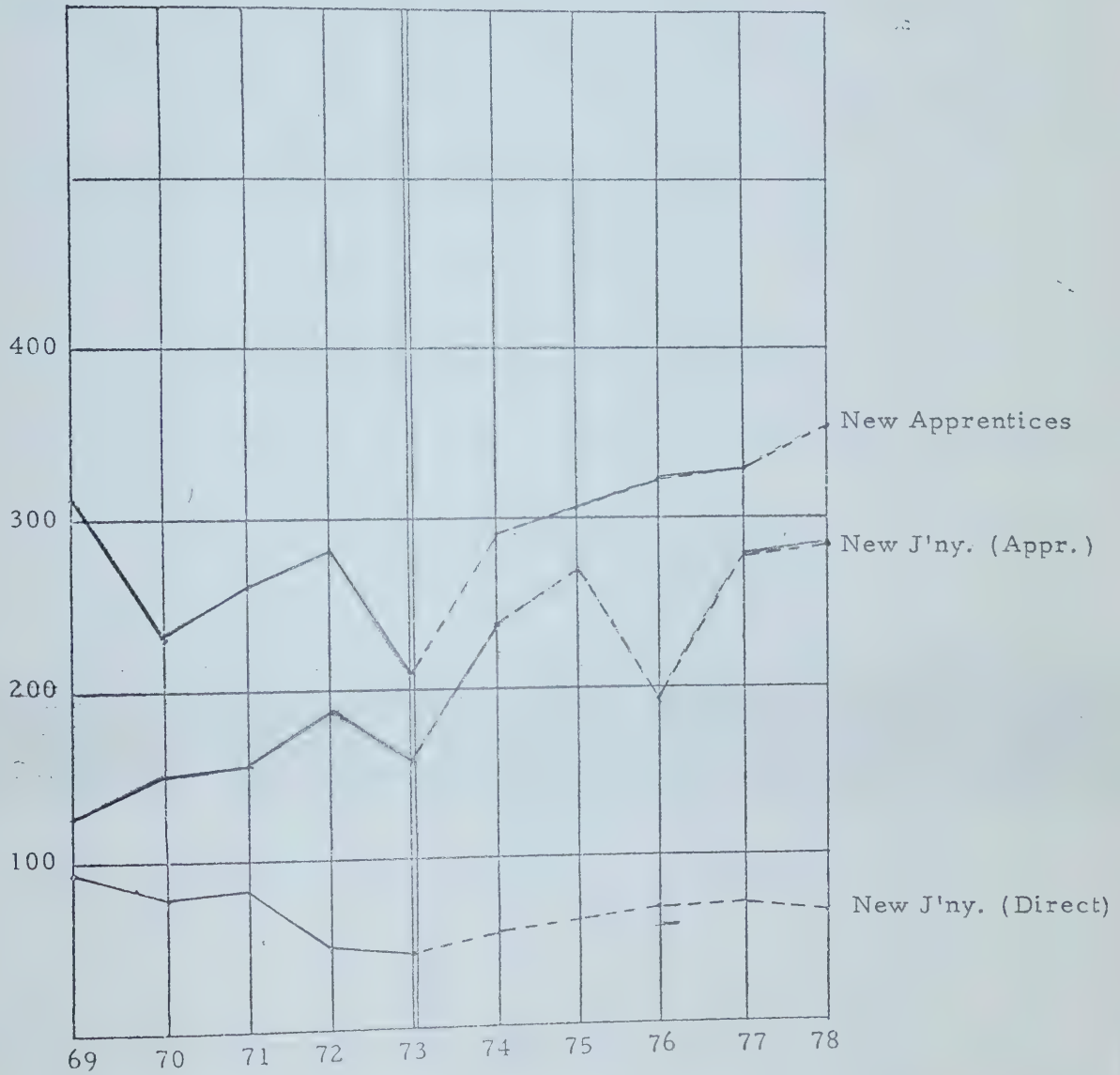
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	466	532	544	509	642	656	669	672	672	672
New J'ny. (Appr.)	341	327	371	345	457	470	485	490	490	490
New J'ny. (Direct)	227	218	229	159	166	161	159	155	155	155



Comments: Forecast - 4821 increase by 1978 - 3210 J'ny 1611 Apprentices
Better manufacturing, throwaway or exchange units and owner awareness have resulted in an increasing number of vehicles being serviced by each mechanic, which factors contribute to the fact that the trade has rot experienced prolonged periods of expansion or decline. The predicted 2% rate of increase appears normal. Approximately 15% hold dual certification.

PLUMBERS

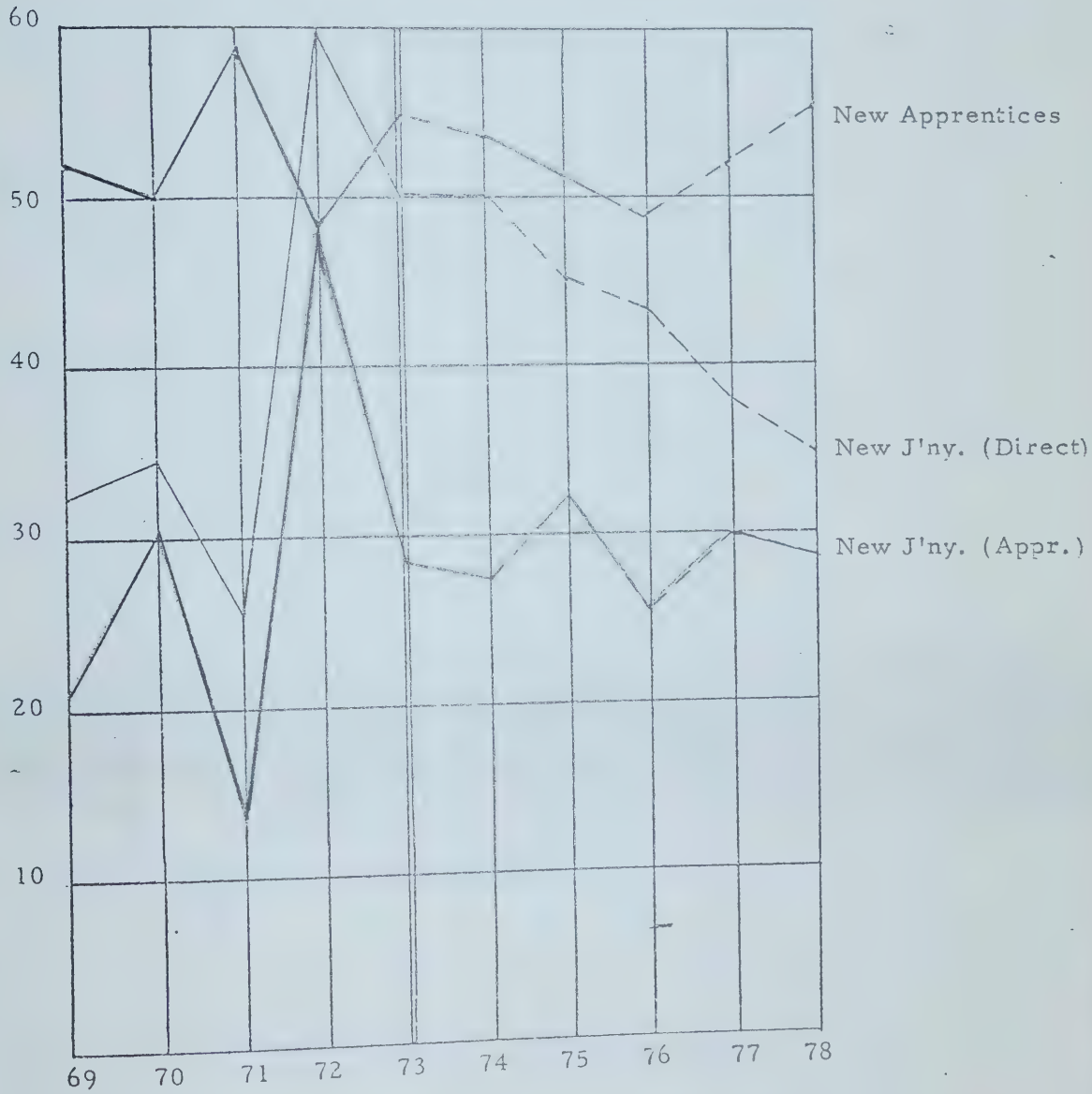
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	327	237	260	281	208	290	305	325	330	350
New J'ny. (Appr.)	130	151	155	189	158	240	265	195	275	280
New J'ny. (Direct)	90	76	78	48	46	52	56	62	63	56



Comments: Forecast - 2674 increase by 1978 - 1544 J'ny 1130 Apprentices
With work opportunities and working conditions good, the trade may be expected to continue the steady long range growth rate indicated by the number of new Journeymen by way of apprenticeship. Many certificated Plumbers hold dual certification in Gasfitting and/or Steamfitting.

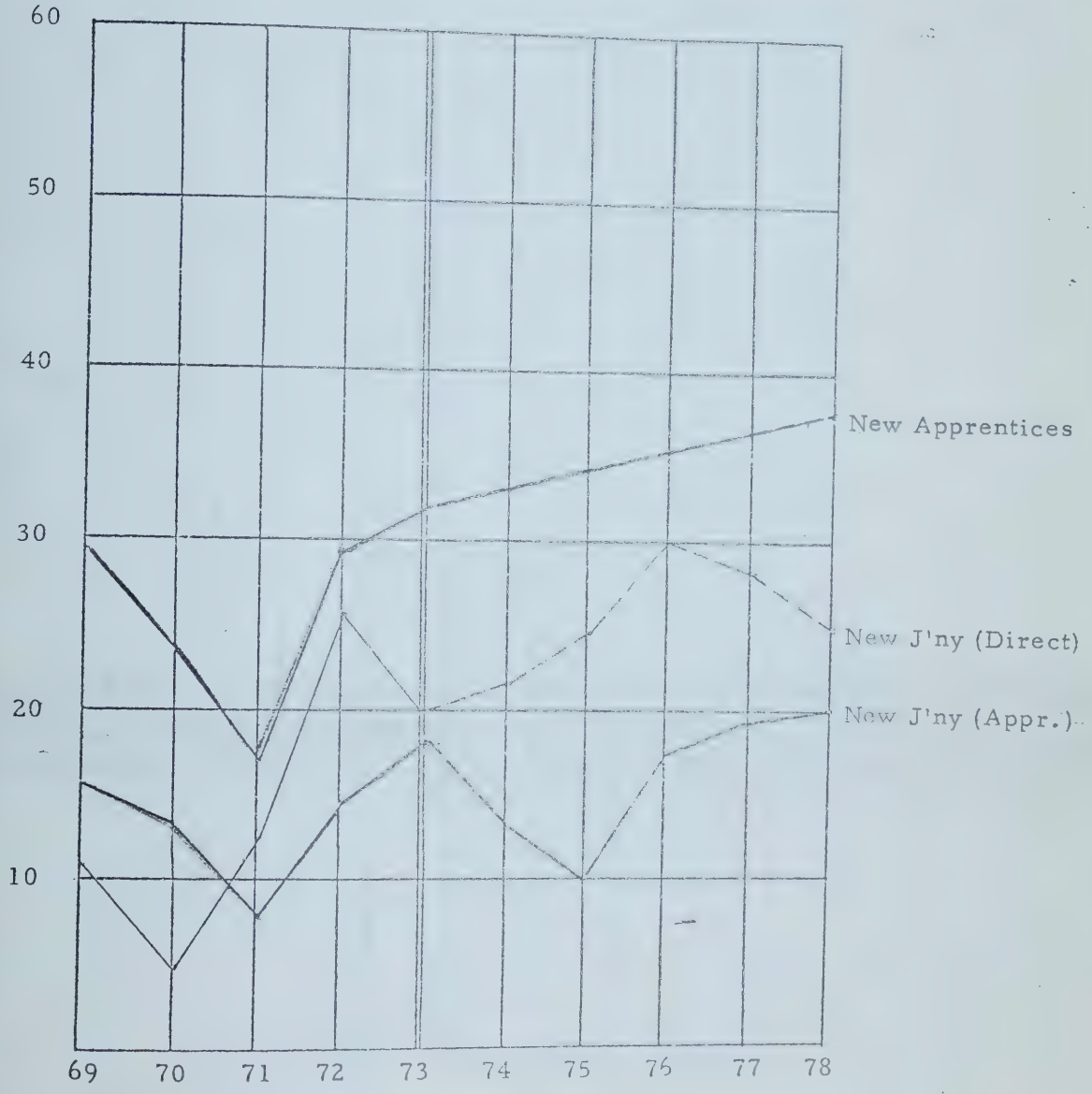
RADIO TECHNICIAN

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	52	50	58	48	55	53	51	49	52	55
New J'ny. (Appr.)	21	31	14	48	28	27	32	26	30	29
New J'ny. (Direct)	33	35	26	03	50	50	45	43	38	35



Comments: Forecast - 499 increase by 1978 - 355 J'ny 144 Apprentices
A decline in new apprentices until 1976 is projected on the basis of competition from construction for available people. This factor may also decrease the number of new journeymen earning certification during that period. The new apprentice increase forecast after 1976 is based on the possibility of diminishing opportunities in construction at that time.

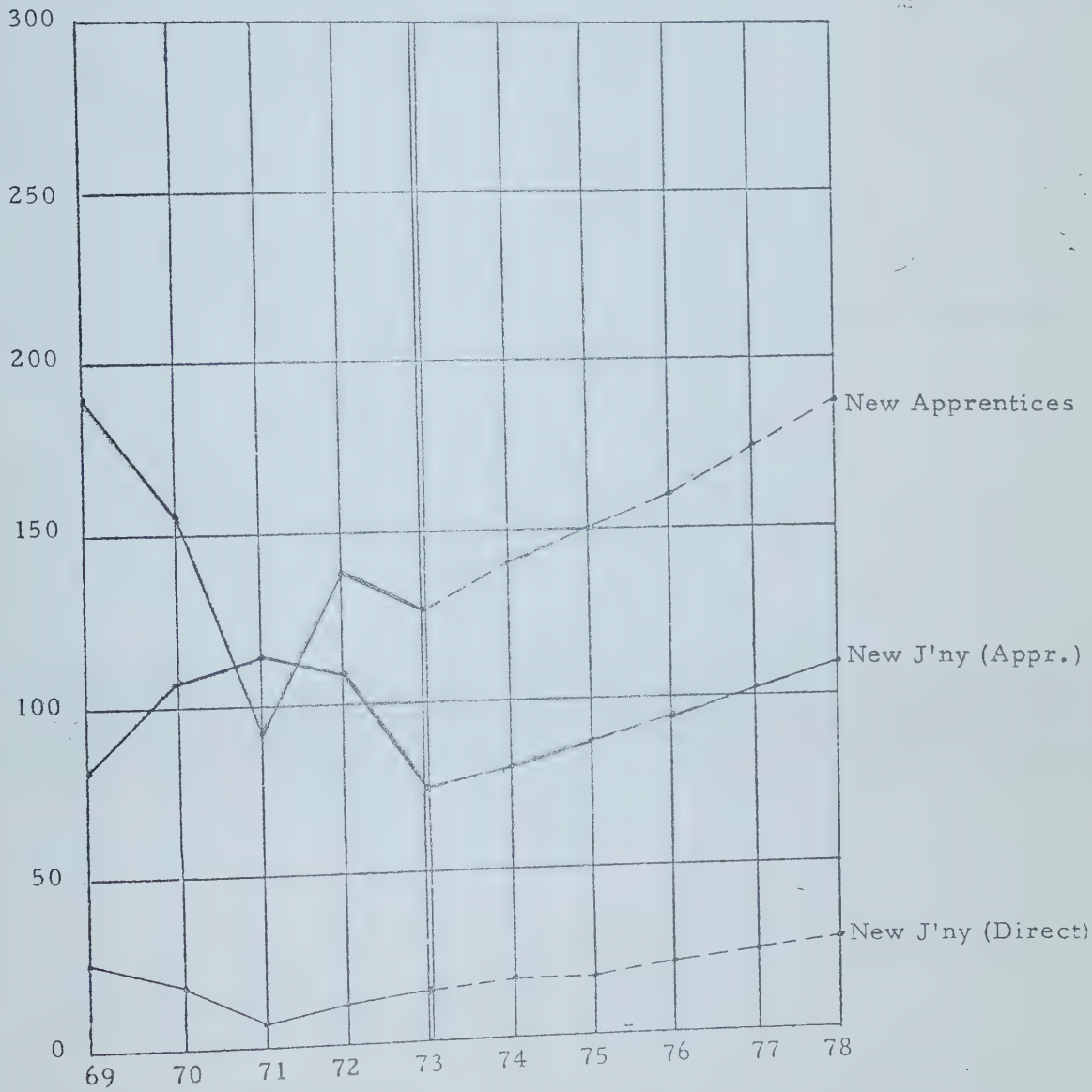
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	29	24	17	29	32	33	34	35	36	37
New J'ny. (Appr.)	16	14	8	15	18	14	10	17	19	20
New J'ny. (Direct)	11	5	13	20	20	22	25	30	28	25



Comments: Forecast - 295 increase by 1978 - 210 J'ny 85 Apprentices
Small in total numbers, this trade is expected to engage new apprentices at a steady rate of 2.7% per year and to increase retention slightly due to increasing opportunities in construction. New Journeymen (Direct) may decrease or increas as major construction projects decrease or increase.

SHEET METAL MECHANIC

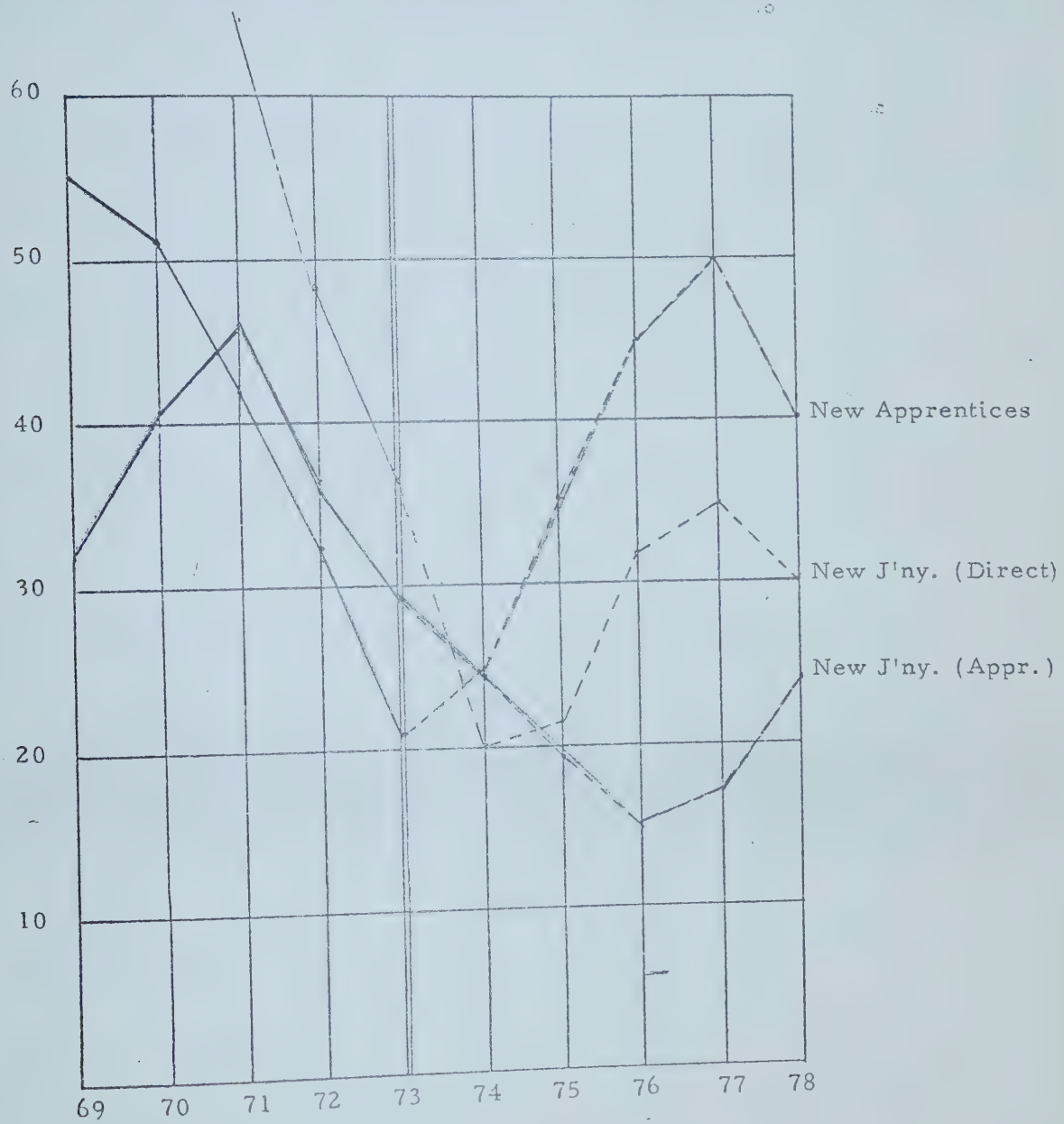
	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	191	157	91	138	129	139	150	162	175	189
New J'ny. (Appr.)	81	108	115	110	74	80	87	94	102	110
New J'ny. (Direct)	25	20	9	13	18	20	20	22	24	26



Comments: Forecast - 1125 increase by 1978 - 585 J'ny 540 Apprentices
We assume a uniform increase of 8% annually for new apprentices, which will continue the present trend.

STEAMFITTERS

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	55	52	43	33	21	25	35	45	50	40
New J'ny. (Appr.)	32	41	46	36	29	24	19	15	17	24
New J'ny. (Direct)	68	73	67	48	37	20	22	32	35	30

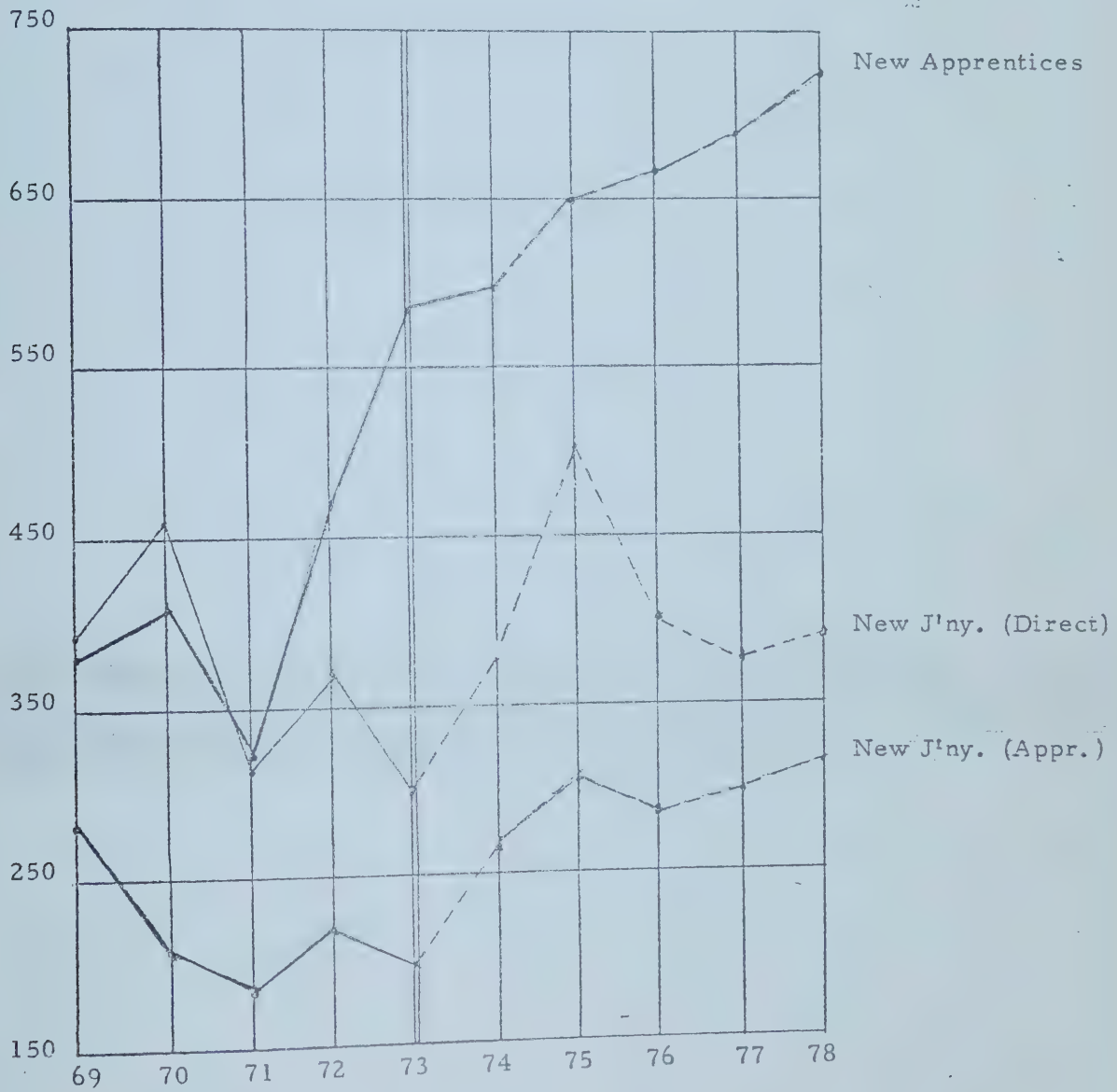


Comments: Forecast - 362 increase by 1978 - 238 J'ny 124 Apprentices

High percentage of journeymen hold at least two certificates in the trades of Plumber, Steamfitter and Gasfitter. If industrial contractors commence indenture of apprentices, there could be a very sharp increase, otherwise we foresee a steady growth in new apprentices as indicated.

WELDER

	'69	'70	'71	'72	'73	'74	'75	'76	'77	'78
New Apprentices	393	408	341	465	571	600	650	662	696	731
New J'ny. (Appr.)	283	220	214	228	217	270	315	298	313	329
New J'ny. (Direct)	397	454	340	370	318	375	510	430	390	420



Comments: Forecast - 5210 increase by 1978 - 3650 J'ny 1560 Apprentices
Projection is based on previous growth rate and anticipated needs of new industry. Many journeymen may leave employer shops for higher wages in construction, but the voids may be filled by new apprentices. If major plant construction continues to increase, a large transient force of welders is likely to invade Alberta.

APPENDIX "E"

APPENDIX "E"

A REVIEW OF WAYS AND MEANS OF INCREASING THE NUMBER OF SKILLED TRADESMEN IN THE ALBERTA WORK FORCE

R.J. Allison
Alberta Manpower & Labour

Final Draft
August 29, 1974.

A Review of Ways and Means of Increasing the Number of Skilled Tradesmen in the Alberta Work Force

This review covers existing and suggested approaches to the problem of increasing the output of trades' journeymen from the Provincial Apprenticeship Program. It also makes reference to other ways and means of producing skilled tradesmen that may be considered viable alternatives to the Apprenticeship system. It does not address itself to manpower mobility programs as this approach is not within the context of Manpower Training responsibilities, except for the certification of journeymen candidates in accordance with the Apprenticeship & Tradesmen's Qualfication Acts.

In preparing this review I have included data from recent reports prepared by the Apprenticeship & Tradesmen's Qualification Branch. The format is in three parts. The first part deals with the status quo approaches of the existing Apprenticeship Program; the second part deals with possible innovations within the existing program; and the third part deals with methods of developing skilled tradesmen in addition to the apprenticeship system. Advantages and disadvantages and matters of concern connected with innovations are outlined when applicable.

A. Existing Ways and Means of Attempting to Increase the Development of Tradesmen Through the Provincial Apprenticeship Program

1. The development of an Apprenticeship Registry for the purpose of assisting employers having apprenticeship vacancies to communicate with apprenticeship candidates wishing to become indentured apprentices. The modus operandi and objectives of this approach, which was implemented in late June of this year, are outlined in Appendix "A". It has been reported by the A&TQ Branch that over 1,700 employers have listed approximately 2,800 apprenticeship vacancies in all designated trades with this registry system (see Appendix "B" for trade break-down of listings).

2. The development and implementation of an advertising campaign for the purpose of attracting potential apprenticeship candidates to the trades. This campaign is designed to make the public aware and familiar with the career opportunities available in the trades. It also has spillover benefits aimed at enhancing the image of the trades and boosting the morale of men and women associated with the trades. The campaign has as its theme, "Blue is Rewarding". A campaign schedule is attached (see Appendix "C").

3. A Provincial Employment Committee for Welder apprentices has been formed for the purpose of providing indenturing opportunities to apprentice candidates who are unable to secure conventional indenturing in this trade (see Appendix "D").

4. The Provincial Advisory Committee for the trades of Plumber and Steamfitter have been requested to make provision for the surrendering of those work role functions covering industrial pipefitting in order that a trade of Pipefitter can be established and designated. There appears to be reluctance on the part of both Plumbers and Steamfitters to entertain this request (see status report prepared by A&TQ Branch -Appendix "E").

5. The Field Services Section of the A&TQ Branch is being expanded for the purpose of monitoring and expediting the progress of apprentices in the system.

B. Innovative Ways and Means of Increasing the Development of Tradesmen Within the Provincial Apprenticeship Program

1. (a) Work Permits

In situations where a designated trade is delaying or preventing the progress of a project due to a shortage of journeymen and apprentices it is suggested that the

A&TQ Branch issue work permits to laymen allowing them to work in that trade for the duration of the project. Training in work areas of the trade in which the work permit holders are to be employed could be given on-site as required. It is also suggested that a record of on-the-job work activities performed by permit holders be maintained and that credit for this experience be awarded towards apprenticeship.

(b) Advantages

(i) It would provide a means whereby workers would be allowed to practise in a trade in order that the short-term manpower requirements of a project could be satisfied.

(ii) It would provide an incentive for permit holders to enter into apprenticeship or attempt to qualify for journeyman status by awarding credits for work experience gained while working on the project.

(iii) It may assist unions to meet their worker requirements for employers.

(iv) It could in some cases precipitate the entry of permit holders into an apprenticeship program during a special project rather than at its termination.

(c) Disadvantages

(i) In some cases unions may elect to issue their own work permits which could be valid beyond the termination of the special project work permit issued by the government.

(ii) This arrangement would apply primarily to the construction trades.

(iii) It could contribute directly to substandard and unsafe workmanship.

(iv) The administration of such a system may require additional field staff.

(d) Questions of Concern

(i) What criteria would be employed for determining when a project is to be designated a special project and allowed to employ holders of work permits?

(ii) Should the period of validity of work permits be tied to the duration of the special project?

(iii) Should work permits apply only to a trade or to all trades active on the special project?

(iv) Who and how should wage levels and increments be determined?

2. (a) Fracturing a Trade into Modules

This approach would require that a trade be broken into parts or areas of work and that each part be recognized as a module of the trade. Certification in all modules would be required in order to attain full journeyman status in the trade. An example of a fractured trade in Alberta might be that of a Motor Mechanic. Modules of this trade could be: carburetor specialist, ignition specialist, transmission specialist, front-end specialist, etc. This approach has been employed with a number of trades in the Province of Ontario where the population base and volume of work role activities connected with a trade have ensured the success of this concept of trade fracturing and specialization.

(b) Advantages

(i) It would provide quick entry into the labour force of trade area specialists.

(ii) It would make provision for modules to be credited towards full trade qualification at the discretion of the worker.

(c) Disadvantages

(i) Without the volume of trades activities associated with a substantial population base (i.e. as per Ontario), employment for trade area specialists may be limited. For example in the trade of Motor Mechanic it is suggested that only a few garages in Alberta have sufficient volume of work to keep specialists employed on a full-time basis.

(ii) It creates a wage level problem for the industry.

(iii) The fracturing of a trade may destroy its "red seal" (i.e. interprovincial transfer) status.

(iv) Experience with this system in other provinces indicates that a limited number of module holders follow through to full trade journeyman status. As a result of this experience such a system could lead to a deterioration of the trade.

3. (a) Apprenticeship Requirement as a Condition of a Provincial Industrial Plant Development Permit

This approach would require that recipients of Provincial Permits to develop industrial ventures be required to employ apprentices in accordance with the apprentice/journey-

ALBERTA
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man ratio applicable to the trade(s) engaged in the venture. This requirement should apply to general contractors and to sub-contractors.

(b) Advantages

(i) It would make provision for the indenturing of apprentices on large construction projects (which is not currently taking place).

(ii) It would discourage the practise by some contractors of hiring only journeymen in numbers in excess of actual requirements for the purpose of taking advantage of the "cost-plus" payment arrangements.

(iii) It would provide employment opportunities for unemployed apprentices and apprentice candidates.

(c) Disadvantages

(i) It may require additional field staff to monitor the apprentice program active on such projects.

4. (a) A Reduction of the Institutional Training Component

This concept would set a maximum period of time in an apprentice's program that could be devoted to the theory component presented within an educational institution.

(b) Advantages

(i) It would reduce Provincial and Federal expenditures for training subsistance allowances and pedagogical costs.

(ii) It would reduce the amount of time devoted to classroom training and

increase the amount of time devoted to on-the-job training.

(c) Disadvantages

(i) If classroom instruction in existing programs has been valid, any reduction of it may be detrimental to the development of the apprentice.

(ii) In some trades, particularly the construction trades, apprentices may encounter periods of idleness due to climatic conditions that would normally have been devoted to classroom instruction periods.

5. (a) The Establishment of Two Levels of Certification

This approach would require the recognition by employers of two levels of certification. For example a first class certification could possibly correspond to the existing certificate of qualification or proficiency, while a second class certification might be an entirely new standard of certification corresponding to the level of competency of an existing second or third year apprentice.

(b) Advantages

(i) This approach would provide an option for apprentices to complete their apprenticeship after a short period of technical and on-the-job training and accept a second class certificate.

(ii) This approach would provide a means of satisfying the short-term need for tradesmen requiring only a nominal knowledge and experience in the trade.

(iii) It would provide for a reduction in the cost of training apprentices.

(iv) It would also provide an option for the holder of a second class certificate to continue his training at a later date with an aim to aspiring to a first class certificate level.

(c) Disadvantages

(i) It may provide for disparity in wage levels between first and second class certificate holders which could lead to problems in the negotiation of labour agreements.

(ii) It could result in the general level of proficiency in the trade being reduced.

(iii) It may "short-change" some apprentices in their total trade development as compared with the existing program.

(iv) Holders of second class certificates wishing to aspire to first class certification at a later date may have to overcome such factors as increased personal responsibilities, absence from the training environment, loss of basic knowledge required to comprehend advanced training, etc.

6. (a) The Reduction of the Number of Technical Training Course Periods

This approach would require that the number of occasions on which an apprentice is released from his employer to attend training in an institution be reduced by up to 50%. (i.e. apprentice programs currently requiring four release periods for institutional training would be reduced to two periods of longer duration. This would be equiva-

lent to the total time normally spent by the apprentice in a training institution)

(b) Advantages

(i) It could reduce the overall administration of apprenticeship programs.

(ii) It would reduce the number of examinations.

(iii) It could provide for the completion of the technical training component in possibly a two year span at the front end of the apprenticeship program.

(c) Disadvantages

(i) If this approach were adopted on the basis of similar total lengths of technical training periods, apprentices would be required to be away from work for longer periods, i.e. for one 16 week period rather than two 8 week periods.

(ii) It may impose financial hardship on apprentices because of the longer periods away from work.

(iii) Some training institutions may tend to intermesh the scheduling of apprentice courses with regular technology classes which run for longer periods of time. Such meshing of classes may be detrimental to apprentices and to the regular technology students.

7. (a) Accelerate the Apprenticeship Program

This approach would require that the total number of on-the-job work hours in a trade be reduced, thus shortening apprenticeship indentures. For example, where current

regulations of a trade require 12 months of on-the-job training, these regulations could be changed to reduce this period to 9 or 6 months of on-the-job work experience.

(b) Advantages

(i) It would provide the means by which apprentices could become certified in a shorter time period.

(ii) It may contribute to a reduction of apprentice "dropouts".

(iii) It may be more favourably received by apprentices because the reduction in time would make their goal of certification closer.

(c) Disadvantages

(i) The inclusion of more journeymen through a shorter training period may reduce the effectiveness of the trades.

(ii) Eventually there may be fewer journeymen who are qualified for promotion to positions of higher technical competence because of insufficient apprenticeship training.

(iii) This approach may require the implementation of a series of on-going short term training courses for journeymen in order that their knowledge and skills could be updated to meet the total technical requirements of their trade.

8. (a) Grouping of Trades in Related Areas

This approach would be applicable where overlapping of skills and knowledge are evident in trades, such as mortar trades, carpenter and floor laying trades, etc.

In these cases it may be possible to combine the training and certification processes.

(b) Advantages

(i) This approach would require fewer courses of technical instruction.

(ii) It could contribute to a reduction in the certification and administration processes.

(iii) It would accommodate those trades experiencing low enrolments.

(c) Disadvantages

(i) It may contribute to dysfunctional competition among the apprentices and trades people because well established trades are reluctant to give up their individual identity, even in a training environment.

C. Ways and Means of Developing Tradesmen Other Than by an Apprenticeship Program

1. (a) Institutional Training (Post Secondary)

This method would span the total development of a tradesman from student to journeyman within the confines of an educational institution.

(b) Advantages

(i) It would provide for an accelerated training program because the time wasted on unrelated on-the-job work role activities would be avoided.

(ii) It would provide for a variety of practical work role activities, under simulated conditions, covering the

entire scope of trade functions.

(iii) It would avoid waste time spent by apprentices on menial or repetitive work role tasks.

(c) Disadvantages

(i) Trainees would not be exposed to the real work environment during their training.

(ii) Trainees may not be able to earn while they learn.

(iii) Existing tradesmen in Alberta may be strongly opposed to this approach.

2. (a) Institutional Training (Secondary)

This approach would require that students entering the secondary school system be put immediately into a three year technical-vocational program that would parallel the technical training presented to apprentices in the post-secondary institutions. This program would also require that students gain on-the-job training experience during their summer vacation periods or on a semestered basis. The net result of this approach could be that students graduating from such a program may be in a position to attempt certification examinations for journeyman status.

(b) Advantages

(i) Successful students would enter directly into the work force as skilled tradesmen.

(ii) The period spent in a secondary school would be of tangible benefit to the student and the Alberta labour force.

(iii) The cost of training skilled tradesmen at the post-secondary level would be avoided.

(c) Disadvantages

(i) Students entering the secondary school system would be required to make a decision to pursue a technical vocational education program that could reduce their career options.

3. (a) Block Release Training

This approach would require that employees be released at regular periods by employers for the purpose of receiving training at a technical training institution. This form of training is similar to the apprenticeship system except that trainees would not be required to become indentured to their employers.

(b) Advantages

(i) Trainees would earn while they learn.

(c) Disadvantages

(i) Employers may be reluctant to participate.

(ii) Trainees may not be paid by their employers during their training release periods.

D. Concluding Remarks

In conclusion I should like to make the following remarks with respect to ways and means of increasing the supply of skilled tradesmen:

1. It has been observed by the A&TQ Branch that only a few of the designated trades in Alberta

are currently experiencing a journeyman shortage. On the other hand, manpower demand projections for skilled tradesmen indicate that all trades will experience a supply short-fall position over the next three to four years (1975-79). In view of these projections it would appear that apprenticeship enrollments should be expanded now to meet these future requirements.

2. Emphasis appears to be placed on the development of journeymen and in particular, ways and means of accelerating this process. In reality it is the number of workers in the trades that is of importance regardless of apprentice or journeyman status. It has been reported by the A&TQ Branch that apprentices perform up to 60% of the productive work in trades participating on a work site.

3. Research conducted by the A&TQ Branch into journeyman utilization on work projects indicates that there is a high degree of underutilization of journeymen. This condition frequently is found at work locations where "cost plus" * conditions prevail. This situation suggests that the deployment and utilization of skilled tradesmen in this Province can be made even more efficient and effective than is presently the case.

* "cost plus" refers to the contractual agreement between the general contractor and sub-contractor under which the sub-contractor is reimbursed for total expenses incurred in the performance of contractual assignments. In these cases sub-contractors may over staff their manpower requirements as an insurance for the completion of contractual assignments within required time frames.

APPENDIX "A"

APPRENTICESHIP REGISTRY

The steps for this program:

1. A letter from Dr. Mansfield's desk stating the shortage of tradesmen. This letter contained a questionnaire form to be completed by each employer indicating apprenticeship openings.

2. A letter from the Apprenticeship Branch to acknowledge receipt of questionnaire and to inform the employer of the advertising campaign to attract apprentice candidates.

3. The preparation of nominal rolls listing the employer, his address, telephone number and number of apprentice openings by trade - just under 3,000.

4. Forward nominal rolls to all regional offices for their information for consultant services.

5. Dr. Hohol will hold a press release on 28 August 1974 to inform the media of the advertising campaign and its purpose.

6. 31 August 1974 - Full page ad in newspapers throughout the province (daily). Followed by weekly, etc. to recruit apprenticeship candidates.

7. Blue Collar Week, September 3 - 6.

8. When the advertising campaign commences on the Labour Day weekend, each of our offices will be prepared to respond to requests for apprenticeship information by mail, telephone or office visit by interested parties. We will use a questionnaire card to record basic information which will be retained by the regional office concerned or forwarded to them by Central Office. All apprenticeship candidate information will be directed to Central Registry to be recorded on nominal rolls similar to that of apprenticeship openings. In this way we will have statistics available when required.

9. Maintaining files for Apprenticeship Registry and informing all regions concerned.

Alberta
MANPOWER AND LABOUR

Manpower Division

403/229-3220

406 I.B.M. Building
10808 - 99 Avenue
Edmonton, Alberta, Canada. T5K 0G2

We are aware that many Alberta employers are currently experiencing a shortage of skilled tradesmen. To assist in providing an adequate supply of skilled tradesmen in the future we are establishing an Apprenticeship Registry System.

This system, to be operated by the Apprenticeship and Tradesmen's Qualification Branch of the Department of Manpower and Labour, will take the form of a registry of employers who have job openings for apprentices and a registry for apprenticeship candidates.

This Registry System will help to bring together employers seeking apprentices and apprenticeship candidates seeking employment. This will in time increase the number of qualified tradesmen that will be available to Alberta employers.

In order that this system can become operational, your assistance is requested by completing and returning the attached questionnaire in the enclosed envelope.

Yours sincerely,

Earl Mansfield

Earl Mansfield
Assistant Deputy Minister
Manpower

EAM/ss
Attach.

SURVEY OF JOB OPENINGS FOR APPRENTICES

Name of Firm _____

Nature of Business _____ Phone No. _____

Address _____ Postal Zone _____

_____

_____

Please list your Job Openings for apprentices in the next 12 months by indicating the number of apprentices required for each trade area and the date that they will be required.

		Apprentices	Day	Month			Apprentices	Day	Month
1.	Bricklayer				19.	Heavy Duty Mechanics			
2.	Carpenters				20.	Tilesetters			
3.	Electricians				21.	Power Electricians			
4.	Painters & Decorators				22.	Communication Electricians			
5.	Plasters				23.	Appliance Servicemen			
6.	Plumbers				24.	Bakers			
7.	Steamfitters				25.	Glassworkers			
8.	Gasfitters				26.	Steel Fabricators			
9.	Motor Mechanics				27.	Partsmen			
10.	Auto Body Mechanics				28.	Roofers			
11.	Sheet Metal Mechanics				29.	Floorcovering Mechanics			
12.	Welders				30.	Electrical Mechanics			
13.	Radio Technicians				31.	Instrument Mechanics			
14.	Refrigeration Mechanics				32.	Agricultural Mechanics			
15.	Machinists				33.	Insulators			
16.	Millwrights				34.	Heavy Equipment Operators			
17.	Lathers				35.	Waterwell Drillers			
18.	Cooks				98.	Barbers			
					99.	Beauticians			

Please return not later than 15 July 1974 to:

Apprenticeship Registry
6th Floor, I.B.M. Building
10808 - 99 Avenue
EDMONTON, Alberta T5K 0G5

Alberta

MANPOWER AND LABOUR

Apprenticeship and Tradesmen's
Qualification Branch

403/429-7311

6th Floor, I.B.M. Building
10808 - 99 Avenue
Edmonton, Alberta, Canada
T5K 0G5

File No.:

APPRENTICESHIP REGISTRY

Thank you for your reply to the letter from our Assistant Deputy Minister, Earl Mansfield, regarding apprenticeship openings in Alberta. We expect that this registry will be of considerable assistance to employers due to the increased demand for skilled employees.

The second phase of this program will be presented by the news media later this month to encourage requests from apprenticeship candidates. When this information has been recorded we will begin to refer prospective apprentices to employers at the earliest possible date.

We would suggest that you keep in close contact with your local Apprenticeship Branch representatives. The address and telephone number of each regional office can be found in the enclosed newsletter.

Yours truly,

M. J. Jahrig
Assistant Director - Field Services

MJJ/eac

Enclosure

The purpose of the Apprenticeship Registry is to:

1. Increase the skilled work force in Alberta by encouraging and assisting Albertans to enter into a trade.

2. To record apprenticeship openings in all designated trades by the use of questionnaires to employers.

3. To attract apprenticeship candidates by placing factual advertisement articles on billboards, bus cards, in newspapers and on television.

4. To present an insight into the world of a tradesman so that the public will recognize and accept the "blue collar" worker as an equal in society.

5. To attempt to match people with jobs to assist in the development of all of our resources.

APPENDIX "B"

August 26, 1974

1. Bricklayers - 13
2. Carpenters - 190
3. Electricians - 174
4. Painter & Decorator - 38
5. Plasterer - 19
6. Plumber - 96
7. Steamfitter - 34
8. Gasfitter - 32
9. Motor Mechanic - 422
10. Auto Body Mechanic - 184
11. Sheet Metal Mechanic - 87
12. Welder - 323
13. Radio Technician - 28
14. Refrigeration Mechanic - 30
15. Machinist - 57
16. Millwright - 34
17. Lather - 8
18. Cook - 78
19. Heavy Duty Mechanic - 255
20. Tile Setter - 16
21. Power Electrician - 28
22. Communication Electrician - 3
23. - Appliance Serviceman - 18
24. - Baker - 29
25. Glassworker - 26
26. Steel Fabricator - 159
27. Partsman - 179

28. Roofer - 68

29. Floorcovering Mechanics 22

30. Electrical Mechanic - 25

31. Instrument Mechanic - 14

32. Agricultural Mechanic - 97

33. Insulator - 28

34. Heavy Equipment Operator - 86

35. Water Well Driller - 6

98. Barber - 19

99. Beautician - 79

Positive Responses - 1069
Negative responses - 685

TOTAL APPRENTICESHIP OPENINGS - 2,004

APPENDIX "C"

APPRENTICESHIP ADVERTISING CAMPAIGN

CAMPAIGN TIMETABLE

Thursday, August 22 - Billboards will be erected throughout the Province.

Saturday, August 31 - Full page advertisement in 7 Alberta Cities served by daily newspapers.

Monday, September 2 - Busboards will be placed in buses in Edmonton, Calgary, Red Deer, Lethbridge, Medicine Hat.

Monday, September 2 - Newspaper advertisement to appear in selected Weekly Newspapers in the Province.

Saturday, September 7)
Saturday, September 14)half page advertisements will appear in
Saturday, September 21)7 Alberta Cities served by daily newspapers
Saturday, September 29)

Sunday, September 15 - Television announcements commence on TV Stations to October 15.

The advertising program will commence August 22 with Billboards carrying the slogan 'blue is rewarding' and it will run through until October 15th using television as the final media.

The strong visual impact of the 'blue collar' theme should have a run-over effect past the termination date of the campaign.

APPENDIX "D"

Director, Apprenticeship and
Tradesmen's Qualification branch

Mr. R. J. Allison
Co-ordinator
Manpower Training

August 12, 1974
429 7311

INDENTURING OF WELDER APPRENTICES - CONSTRUCTION INDUSTRY TO A SPECIAL COMMITTEE

This will put in summary form, the developments as a result of a request by the welding industry to arrange as an alternate method, for the indenturing of Welder apprentices in the construction industry to a "special" committee.

1. On June 26, 1974, the Apprenticeship Board met with four representatives from the Provincial Advisory Committee for the Welder Trade (Messrs. Halkier, Orchard, Bannister and Whitford), who presented the following recommendation which had been passed unanimously by the Welder PAC on June 6, 1974:

> Recommendation - "The concept of indenturing Welder apprentices in the construction industry to a committee composed of Labour Representatives, Employer Representatives, and chaired by a Government Representative, is sound."

2. The Apprenticeship Board at its June 26 meeting, approved in principle this recommendation and agreed that a "special" provincial committee be set up to act as an alternate body for the indenturing of Welder apprentices in the construction industry. This special committee, in such cases, would fulfil the responsibility of a "normal" employer, to include the:

- submission of apprentice applications,
- completion of record book information,
- arrangement for technical courses.

3. Mr. M. Jahrig, Assistant Director, Field Services, within the next two weeks, will be seeking nominations for membership to this committee, from both Labour and Management. It is hoped that this committee will be ready to function early in September 1974.

4. Some suggested guidelines for the establishment of this committee follow:

Membership: The committee should be composed of 5 members:

- 2 representing Labour
- 2 representing Management
- Chairman - appointed from "senior" staff of Apprenticeship and TQ Branch, Field Services Section

(Consideration should be given to having one of the above members selected from the membership of the Welder PAC)

Geographical Distribution of Members: Since the committee is to be provincial in nature, consideration should be given to obtaining nominations from both the Northern and Southern sections of the province.

Nominations: Nominations for membership to this committee might be requested from:

- The Building Trades Council (they may wish to nominate the two members to represent Labour),
- At least one of the "international" industrial contractors,
- At least one of the "provincial" based contractors.

Chairmanship:

Appointment - The Chairman, who is a Government representative, should be one of the senior officers from the Apprenticeship and Tradesmen's Qualification Branch, Field Services Section.

Terms of Reference of Committee: The Chairman, at the first meeting of the committee, will establish the procedures to be used, in the indenturing of Welder apprentices to this special committee. These procedures should be submitted to the Director, for approval.

Financial Arrangements: As this committee is to function as an "Employer" representative, it is my recommendation at least for the present, that the financing of the committee's activities be borne by the Labour and Management organizations. The Chairman's expenses of course, would be paid as a Civil Servant.

G. L. PEERS

GLP/rj
Copies to: Mr. D. I. Gardner
Dr. E. Mansfield
(Mr. Watson & Mr. Jahrig)

APPENDIX "E"

Alberta

MANPOWER & LABOUR

MEMORANDUM

FROM Director, Apprenticeship and Tradesmen's Qualification Branch

OUR FILE REFERENCE

YOUR FILE REFERENCE

TO Mr. R. J. Allison
Co-ordinator
Manpower Training

DATE August 13, 1974

TELEPHONE 429 7311

SUBJECT STATUS REPORT - APPRENTICESHIP AND TRADESMEN'S QUALIFICATION BRANCH

Further to your memorandum of August 6th, the following reports are attached:

1. "Status Report - Apprenticeship and Tradesmen's Qualification Branch"

2. Copy of "Suggested Methods to Increase Skilled Tradesmen for the Alberta Work Force" (original forwarded to your office on July 26, 1974).

for G. L. PEERS

GLP/rj
Encl.

NB - see page two re Pipefitter Trade

August 1, 1974

STATUS REPORT - APPRENTICESHIP AND TRADESMEN'S QUALIFICATION BRANCH

I. Apprenticeship Statistics:

A. Overview - 35 Trades:

Number of registered apprentices - June 30, 1974	10141	
Increase in number of apprentices in past 12 months	1002	(or 11%)
Number of graduates over last 12 months	1782	
Number of new apprentices in past 12 month period (Previous high for a 12 month period - 3883)	4152	
Number of cancellations since June 30, 1973	1518	

B. Some Specific Trades - Statistics:

Welder		
Number of registered apprentices - June 30, 1974	1224	
Increase in number of apprentices in past 12 months	253	(or 26%)
Number of graduates (new journeymen) in past 12 months	203	
Heavy Duty Mechanic		
Number of registered apprentices - June 30, 1974	820	
Increase in number of apprentices in past year	129	(or 17%)
Number of graduates (new journeymen) in past 12 months	165	
Steamfitter		
Number of registered apprentices - June 30, 1974	86	
*Decrease in number of apprentices	23	(or -21%)
Number of graduates (new journeymen) in past 12 months	30	
Electrician		
Number of registered apprentices - June 30, 1974	1536	
Increase in number of apprentices in past year	143	(or 10%)
Number of graduates (new journeymen) in past 12 months	270	
Steel Fabricator (Boilermaker - Ironworker)		
Number of registered apprentices - June 30, 1974	159	
Increase in number of apprentices in past year	32	(or 25%)
Number of graduates (new journeymen) in past 12 months	8	

(Note: This is a relatively new program)

II Concerns and Activities - Relating to:

A. Welder Trade

The Provincial Advisory Committee, Welder Trade, recommended (recommendation was later approved in principle by the Apprenticeship Board) that the concept of indenturing Welder apprentices in the construction industry to a committee, is sound. The setting up of this committee to which apprentices may be indentured, and its terms of reference, is presently receiving the attention of the Branch.

B. Steamfitter (Pipefitter) Trade

(1) Apprenticeship Program - At a two day meeting of the Provincial Advisory Committee for the Plumber and Steamfitter Trades held in April 1974, a great deal of discussion was held relative to the inter-relationships of training programs for plumbers, steamfitters and gasfitters. No conclusions were reached, but the Local Advisory Committees were to discuss this matter, and to make recommendations to be considered at another PAC meeting to be held in June 1974.

(Note: This June PAC meeting was not held, as the LAC's had not been able to present any revision in the program. Both Calgary and Edmonton LAC's recommended that the program carry on as presently set up, with possible changes to be implemented in the future.)

It is evident from the number of apprentices registered in the Steamfitter trade (presently 86), that the industry is not giving sufficient support to the apprentice program.

(2) Certification Program (under TQ)

The Steamfitter definition under TQ includes the work performed by the Industrial Pipefitter. However, it would be my opinion at this time, that any attempt to legally enforce TQ for the Industrial Pipefitter would be futile. Consideration (at some time in the future - possibly after new legislation has been enacted) should be given to changing the definition of a Steamfitter, by excluding the work of the Industrial Pipefitter. The industry should be consulted before this action is taken.

III Indenturing of Apprentices by Government Departments:

A. Municipal Governments: Municipalities give full and continuing support to the program.

B. Provincial Government: Government authorities (Central Personnel and Departments) are continuing to work with the Branch in an endeavour to overcome some "structural" difficulties, so that an increasing number of apprentices will be indentured to the Provincial Government.

C. Federal Government: In the past there have been only "isolated" cases where the Federal Government has used our program. However, of late there has been an inquiry from the Ministry of Transport relative to indenturing of apprentices.

IV Central Registry:

- Approximately 10,000 letters were sent out in June, to employers of tradesmen, asking them to register their anticipated number of apprentices required.

- 1700 replies have been received, indicating a total of approximately 2800 apprentices required.

- As "potential" apprentices are made known to the Branch, they are referred to employers, as indicated in the Registry.

V. Advertising Campaign:

An extensive Public Information Program relating to apprenticeship, has been finalized. The campaign, through newspaper advertisement, television spots, bus cards and billboards, will be held late August through September.

VI Courses of Training:

A. Bricklayer, and Painter and Decorator Trades: Technical courses in these trades are now being offered in Calgary (commenced early in 1974), in addition to the well established programs in Edmonton. This arrangement is expected to increase numbers of apprentices in the "south" in the above trades.

B. Carpenter Trade - A First Year Carpenter program is scheduled to be held in Lethbridge for the first time, commencing this fall.

C. Steel Fabricator - Two First Year Steel Fabricator courses will be held in Edmonton this coming term. Previously, training for this trade was given in Calgary only.

D. Upgrading Courses to the Journeyman Level:

- 26 upgrading courses in 13 trade areas are scheduled for 1974-75. 7 of these are in the Welder trade (2 at NAIT, 3 at SAIT, 1 at Lethbridge, 1 at Fairview).

- During 1973, 25 upgrading courses were attended by 331 tradesmen who were seeking "journeyman" certification.

VII Increase in Number of Field Consultants:

The increased number of consultants in the field (4 in the process of being hired, and 9 more to be hired before December 31, 1974) will give greater penetration into industry, with an expected increase in the number of apprentices.

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